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The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service



OPERATING REVENUES AND EXPENSES....

"It was physically impossible

to get out train orders *Fast* enough"



This western railroad was accustomed to seasonal peaks of traffic and knew how to handle them.

After Pearl Harbor, traffic every day was in excess of previous peaks. Trains lost time waiting for instructions, for, as the division superintendent said, "It was physically impossible to get out written train orders fast enough to keep trains moving."

Today the volume of traffic is still greater, but it is moving smoothly, with minimum time lost on sidings because "Union" Centralized Traffic Control is in service.

Under the C.T.C. system, it takes only a few seconds to authorize a train movement. There's no slowing or stopping of a train to receive authority—the engineman gets his instructions by signal indication, at the point where he is to act upon them.

On dozens of American railroads, C.T.C. is easily dealing with situations which would have been impossible to handle under other methods of train operation.



UNION SWITCH & SIGNAL COMPANY

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The Week at a Glance

BRIDGING THE RHINE: A graphic account (by Captain E. J. Phillips of the 2nd M. R. S.) of the phenomenal accomplishment of the Army engineers and the Military Railway Service in throwing a substantial, full-sized, 1,752-foot railroad bridge over the Rhine in 10 days, 43/4 hours appears on page 748. This operation, which provided a vitally essential link in the supply route backing up American armies in their rapid advance across Germany, involved not only the construction of a 23span bridge across a swiftly-flowing river, but also the erection of a 463-foot bridge spanning a nearby canal, the building of 2 miles of connecting track, and extensive rearrangement of supporting yard facilities. The highly complex task of moving up materials for the project was assigned to M. R. S. operating men, while their companion maintenance units had the job of making over yards on both sides of the

"

THE CARS GO WEST: As the atmosphere continues to be roiled with the sound and fury wherewith western congressmen essay to alleviate the distress caused the farmers and the grain trades of their home states by the short supply of box cars on western railroads, the railroad and regulatory agencies responsible to the whole country for the most efficient use of the available cars are going ahead with measures to meet the emergency. As reported in this issue, the western roads are now getting better than 2,300 empty box cars daily from the East, under A.A.R. quota orders, and an I.C.C. order establishing a partial embargo on grain shipments out of the western states has been designed to keep these cars where the need is most acute.

CLOSE SHAVE: If the Selective Service people had gone ahead with their plan to draft all able-bodied men under 30, even those classed as key men in essential industries, the efficiency of the railroads would have been so impaired by the loss of 40,000 employees that it would have been necessary to invoke priorities on freight movements within 30 days. The authority for this startling indication of the strain under which the railroads have been delivering unprecedented performance—despite a niggardly government policy on material allocations—is O. D. T. Director Johnson. More straight-from-the-shoulder disclosures from this source are reported in the news pages.

SIMPLE PROPORTION: Another point that Colonel Johnson made in a recent talk in Washington was this—the Army apparently is much more concerned about seeing one German locomotive put out of service than it is about seeing dosens of our own railroads' engines standing idle because there are no men available to run them. This is a fair conclusion to draw, at any rate, when such a big to-do was made over the feat of an aviator in putting a single enemy locomotive out of commission by a skillful attack at the very time when 30 American switch engines were

idle, on just one railroad, for lack of crews. If interference with the enemy's supply lines is so important—and no one questions it—it can reasonably be asked if interference with our own supply lines isn't a matter of enough concern to call for vigorous corrective measures.

DETOUR WEATHER: As if they were not already sufficiently burdened with equipment and manpower troubles, the southwestern roads this month have been hit by extraordinarily high waters which at one time or another have tied up busy main lines in Texas, Oklahoma, Kansas, Arkansas, Louisiana and Missouri. Details appear in this issue's news pages.

SAILING DAYS: An adaptation of the old "sailing day" plan for dispatching l.c.l. shipments—known as the Hartford Plan and worked out successfully, with the cooperation of shippers, on the New Haven—attracted considerable attention at a recent conference of eastern roads seeking ways to clean up an embarrassing accumulation of merchandise freight at transfers and freight houses. The report of the meeting sent out by Car Service Division Chairman Kendall is discussed in the news pages.

MILITARY OBJECTIVE: The railroad was first employed extensively as a military instrument in the American Civil War, and since that time, as warfare has become more and more highly mechanized, military operations have become increasingly dependent upon reliable and adequate rail service to keep the supply lines fluid. One of our editorials this week points out how the Army has neglected opportunities, in times of peace, to exercise its influence to insure the development of a domestic railway system fully adequate to its wartime requirements. It suggests also that the rapid growth of the Army Transportation Association is creating an organization through which the weight of the armed forces could be brought to bear properly and effectively against political and economic developments dangerous to the welfare of the most important medium of military transportation.

BRIEFLY NOTED: Transactions of the April 24 meeting of the executive committee of the American Wood-Preservers' Association, held in lieu of the annual convention in keeping with the O.D.T. ban on such gatherings, are reported on page 754. . . . Having made up its mind to hear Georgia's charge of conspiracy against the railroads, the Supreme Court quickly dismissed the roads' petition for further hearing on the implications of rate-making by court procedures. . . . Defending his optimistic estimates of the railroads' post-war payrolls, Retirement Board Chairman Latimer continued his advocacy of bigger benefits for the brothers. . . . Professor Cunningham brings some air cargo enthusiasts predictions down to earth. . . . General Ayres foresees the largest ton-mile movement in history in this year's second quarter, unless munitions output is cut back.

HITTING BELOW THE BELT: Railroad officers and employees who take justifiable pride in the remarkable safety record achieved in recent years by their cooperative efforts cannot regard with complacency those recurring outbursts of uninformed and sometimes malicious criticism of one phase of that accomplishment-train accident reduction-which have been cropping up in the press and on the radio with shocking frequency of late. A recent article in "Harper's," a series of hysterical blasts by a radio commentator and columnist who has never been credited with any exceptional endowment of knowledge of pure or applied technology, and a garbled and sinister compilation of misrepresentations in "Magazine Digest"—these examples of reportorial irresponsibility have now been followed by an ill-begotten piece in a St. Louis newspaper which appears to have been deliberately calculated to stir up public clamor against the railroads over a sin they haven't committed. This week's leading editorial discusses this egregious misuse of the freedom of the press.

PREPARING FOR ADVERSITY: Another article in the series reviewing the recent history and current financial position of railway companies that have been improving their capital structure and reducing their annual charges through refinancing operations appears this week on page 745. It outlines the details of a new \$79 million issue successfully marketed by the Erie. Upon completion of this transaction, which is particularly noteworthy because the road emerged from drastic reorganization proceedings only a little more than 3 years ago, the Erie will have accomplished a 66 per cent reduction in annual charges since 1937.

WELDED BOILERS: A prediction that a considerable number of welded locomotive boilers will be in use on American railroads in a few years, and that their use will solve some operating perplexities, concludes a feature article, on page 752, based on a recently delivered technical paper prepared by James Partington of the American Locomotive Company. That prediction will not come true, however, this authority warns, until railroad men acquaint themselves with the advantages of welded boilers and the requirements of the welding code rules, and thus through personal conviction become active advocates of their more general installation on the railroads.

SOME QUESTIONS: An editorial this week points out why the railroads are particularly good post-war prospects for the output of the machine tool builders, and then proceeds to suggest some of the questions to which the manufacturers will want answers from the railroads in order to meet their needs most effectively. The wider use of roller bearings and the refinements incident to the general introduction of streamlined passenger equipment are only two examples of the new situations to be met in designing shop machinery for the railroads of the future.



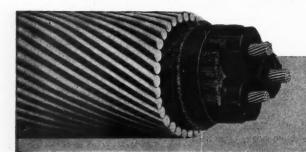
speeds present war effort

IN 1925, when the Central Railroad of New Jersey replaced its original Newark Bay Bridge structure with a new four-track railroad bridge — considered the largest four-track drawbridge assembly in the world — all signal, control and power circuits were equipped with Okonite wires and cables as was the original bridge. This bridge enabled the Jersey Central to operate more trains into its terminal — a speed-up that is helpful in these days of troop and material movements.

Long, failure-free service performed by Okonite cables on the earlier bridge and on the rest of the system influenced the railroad to use Okonite for this larger structure—a wise choice, as the "new" bridge now is 20 years old.

The main power supply is carried from Elizabethport to the bridge through two Okonite-Callender paper insulated cables. On the bridge proper, these power feeders are Okonite non-leaded steel tape armored cables cleated to the structure. From there, across channel to the center control pier, Okonite lead covered steel wire armored submarine cabledelivers the power. All are 3-conductor, 2,200-volt cables.

Okonite wire was also used by the Central Railroad of New Jersey for all control, signal and incidental wiring on the present bridge. The Okonite Company, Passaic, New Jersey.



OKONITE CHONAL INSULATED AND CABLES

RAILWAY AGE

Perverted Use of Freedom of the Press

Freedom of the press is the most essential bulwark of liberty. But abuse of that freedom, by misstatement or perversion of facts to accomplish an unworthy end, can do incalculable harm. Railway Age, in an editorial in its issue of April 14, called attention to such an abuse of its freedom by "Magazine Digest," and now has to call attention to a similar abuse of it by the "St. Louis Post-Dispatch."

"Magazine Digest" published an article on railway accidents which it said was "adapted from Railway Age" and the authorship of which it attributed to W. R. Triem of the Pennsylvania Railroad. The article wholly misrepresented the facts regarding railroad accidents, their causes and their means of prevention. The five-sixths of it containing the misrepresentations never appeared in any form in Railway Age, and never were written in any form by Mr. Triem. Their attribution to Railway Age and Mr. Triem was a complete fabrication.

Railway Management Stigmatized

But the "St. Louis Post-Dispatch," which always displays animus toward the railways, made haste to republish the article in its issue of April 11 and to publish in the same issue an editorial in which it stated: "In an article in *Railway Age* he (Mr. Triem) said exactly what this newspaper has been saying for a long time; that the railroads are woefully behind in installing adequate safety equipment. . . . He proposes the firmest corrective we have seen proposed: legislation by Congress to hold railroads criminally liable for preventable accidents." Mr. Triem never made any such statements or proposed the "corrective" attributed to him; but the "Post-Dispatch's" editorial, which was entitled "Congress Should Force Protection of Public," was an endorsement of them.

The "Post-Dispatch's" editorial, which has been quoted in several newspapers, shows it knows virtually nothing about the true causes and preventives of railway accidents; that it used Railway Age's name to give an odor of authority to its ignorance; and that its purpose was to injure the private management of the railroad industry by unjustifiably inciting public sentiment against it. The incontrovertible record, as is known by everybody who has ever studied it, proves that a great majority of railroad accidents always have been and still are due to failures of employees to observe operating rules and properly utilize safety appliances already provided. That the "Post-Dispatch," in its pretended zeal for railroad safety, did not advocate legislation for criminal punishment of employees as well as railroads for "preventable accidents" shows its sinister purpose of stigmatizing railway management.

The demonstration that a large majority of railway accidents are due to "man-failures" is to be found both

in the annual accident statistics of the Interstate Commerce Commission and in the history of the principal means by which railway accidents have been greatly reduced. The first conference based on the fact that most railway accidents were due to "man-failures," and resulting in the creation of a committee representing both management and employees to promote "safety first," was held on the Chicago & North Western at Baraboo, Wis., in August, 1910. The writer attended this conference. He believed the method adopted had greater promise than any that had ever been tried. Therefore, Railway Age reported the conference at length, published an editorial regarding it, and thereby started in its columns a campaign which caused formation of "safety-first" management-employee committees throughout the country. Ever since then management and employees on most railways have been loyally cooperating in behalf of "safety first." The railways meantime have greatly increased and are still increasing their use of every available kind of safety appliances; but is has been principally by the cooperation of management and employees that their safety record has been made as good as that of any other industry in the world.

Enormous increases of freight and passenger traffic, inability to get adequate materials and new equipment, and heavy losses of experienced employees, have caused the railway accident record to be somewhat marred during the present war. Nevertheless, it has continued to be incomparably better than before the "safety-first" movement was started. In the five years ending with 1910 the railways had an average of only 451 employees for each one killed in an accident; in the five years ending with 1943 they had an average of 1571 employees for each one thus killed—a reduction of 71 per cent in fatalities to employees in proportion to their number. In the five years ending with 1910 the railways carried an average of 2,503,000 passengers for each one killed; in the five years ending with 1943, an average of 7,183,-000 passengers for each one killed—a reduction of 65 per cent in fatalities to passengers in proportion to the number carried.

Calculated and Libelous Lying

In view of this record of achievement, railway management. Mr. Triem and Railway Age naturally resent the calculated and libelous lying about what they have done and said which has been disseminated by part of the press. If there is any reason for making railroads or their employees criminally liable for "preventable" accidents which most of them do their utmost to prevent, there is much more reason for making the press criminally liable for abuse of its freedom by the intentional dissemination of false propaganda having the plain purpose of injuring those attacked.

Making a Science of Military Transportation

The recently organized Army Transportation Association already has 23 local chapters, listed in an item in our news pages, and a membership in excess of 10,000, and is growing rapidly. The opportunities of this organization for service to the national defense and to the transportation industry, and for the advancement of the professional competence of its members, are so large that it deserves the unreserved cooperation of the railroad industry, with generous participation of railroad men — civilian as well as military — in its activities.

The relative importance of transportation to armed conflict has been advancing by geometric progression as warfare has become more and more mechanized—but without, as yet, its having achieved formal and permanent recognition from the military as a specialized and complex technique requiring the same degree of attention as is given to artillery, ordnance and the supply of food and munitions. At one time, armies "lived off the land" for food and often, when horses and mules were a principal reliance, for transportation. That is, military planners did not have to calculate on such supplies in advance of actual fighting. They were already in existence, and all the military had to do was to go out and appropriate them.

This condition has changed completely, and the problem of supply, including adequate transportation, has become central to modern conflict. There is no more "living off the land" for either food or transportation in the areas of battle. A retreating enemy doesn't leave much of either behind, and unless the advancing army is thoroughly equipped with supplies and its own instruments of transportation, its advance will be of limited extent.

The Army has not only learned this lesson well but, in theaters of operation, has also become proficient in the technique of rapidly providing the best in transportation-by any and all agencies-depending upon the exigencies of any situation with which the enemy confronts it. In the preservation and further perfection of this highly important technique, the Army Transportation Association should prove an invaluable instrument for the nation's future defense. In its post-war meetings and publications, the Association should be able to weigh the transportation experience of the present war in a manner to lay a groundwork of principles for a science of military transportation and to provide a widespread education in these principles. The ministrations of such an Association should prevent war-time lessons in military transportation from being so largely forgotten, except by a relatively few individuals, in the periods between major wars, as has happened heretofore.

The opportunities of the Army Transportation Association, however, transcend the foregoing important but rather obvious functions. The Army in this war, although it has provided means of transportation in theaters of operation, has continued to "live off the land" as far as domestic transportation is concerned. That is, while the Army made its plans for the utilization of domestic transportation before the present war, it did not concern itself with the adequacy of the supply. Now, as it has turned out, military demands have pressed the domestic transportation machine beyond its utmost capacity. For example, the Army would doubtless be very happy today if the capacity of the

railways between the Mississippi valley and the Pacific coast were double what it actually is. Yet, in the period before the war, nothing was heard from the Army when such questions as subsidies to railroad competitors or the railroads' efforts to secure relief from the long - and - short - haul clause were under discussion. If these questions had been answered more in accord with equitable treatment for the railroads, the railroads would have enjoved greater credit and would, consequently, have made greater investments in plant in the period prior to the war than actually were made. They would, therefore, have had more capacity to serve the war program than they actually have.

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An active military transportation association in time of peace could be a force of the greatest service to the

Time for Pa to Assert Himself



national welfare by its informed alertness to untoward transportation developments which might be a threat to national security in time of war. It would be the duty and opportunity of such an organization to speak with the authority of disinterested knowledge in behalf of the continued health and development of all instrumentalities of transportation of proved usefulness to the nation at war. The railways, as the most important medium of military transportation, will certainly want to play their full part in assisting this worthy organization in the realization of its great potentialities for the advancement of the national security.

Post-War Railway Shop Machinery

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How much and what kind of machinery will be needed in railway shops after the war? Machine tool builders would like to know the answer to this question, and so would some of the best-informed railway tool supervisors and shop experts who admit lack of definite knowledge regarding certain trends in equipment maintenance practice and shop machine requirements of the future. Unquestionably, this is a matter of great importance to railways as well as to the machine builders.

In ordinary times, the automotive industry, for example, which is geared to high production and generally changes models each year, buys so much more machine equipment annually than railroads do that many machine manufacturers almost totally disregard the railway market. Others recognize the steadying influence of railway purchases, which aggregate, over the years, a sizable volume of machine units, and cultivate railway business by developing both standard and special-purpose machines adapted to railway requirements.

At present, an increasing number of these manufacturers look on the potential railway market for shop machinery after the war as one bright spot in an otherwise rather drab picture, because (1) railroads, with large purchasing power indicated for a considerable period after the war, will be in a position to buy needed equipment; (2) they are one of the few present essential industries not heavily re-tooled during the war period; (3) cumulative heavy wear, obsolescence and deferred replacements will make their need for modern machine equipment probably greater than ever experienced.

The big need and demand will be, as always, for standard types of machine tools, such as lathes, shapers, boring machines, millers and grinders, with emphasis on rugged construction, accuracy, ease and convenience of operation. In many individual instances, high productive capacity will be required for standardized railway machining operations.

Special-purpose machines built for railways by the manufacturers include lathes for turning locomotive and car wheels, center drive lathes for turning both journals simultaneously, gap lathes for turning the journals of mounted car wheels, car wheel grinding machines, etc. Looking into the future, there are many questions about these machines, some of which can be answered fairly easily and others with much more difficulty.

For example, the widely increased use of roller bear-

ings makes it fairly obvious that new wheel lathes, or lathes with new face plates, designed to accommodate the roller bearing housings, must be installed unless railroads want to go to the expense of removing these housings every time they need to turn a pair of tires and, further, use objectionably long driving dogs due to supporting the wheels on axle centers instead of journal collets. With axles for streamline passenger equipment requiring all-over finish, including grinding and polishing, center drive axle lathes are no longer well adapted for this operation, and if an end drive lathe is substituted what particular features not already included in the standard engine lathe would seem to be required?

Will railway car wheels of the future have to be balanced in the interest of smooth operation and, if so, what balancing machine characteristics are required, and especially, how can the unbalance be corrected? Will car wheels be ground more generally in the post-war period than at present and, if so, on what type of machine? In connection with balancing wheels, will car wheels be finish-turned all over including the plates and hubs and will this work be done by the manufacturer or the railroads? What special new types of machines and equipment will be required for the maintenance of Diesel power?

These and many similar questions are what machine tool manufacturers are asking the railroads. They deserve earnest consideration and authoritative answers.

Mexicans Give Us a Lift

When the final story of the American railroads in this war has been written, a chapter of interest and significance will record the substantial part that Mexicans contributed in helping to maintain thousands of miles of war-burdened tracks at a time when, for lack of other labor, these tracks would surely have become seriously weakened, with unquestioned adverse effect upon our war effort. It was a fortunate day for the American railroads back in May, 1943, when the state departments of the two countries, in conjunction with the War Manpower Commission and immigration officers, negotiated agreements permitting the entry of 6,000 Mexican citizens into the United States for unskilled labor on the railroads, a number that was subsequently raised to 20,000 in June of that year, to 40,000 in March, 1944, to 50,000 in the following July, and, early last month, to a new ceiling of 75,000.

At no time has the full quota of Mexicans been in the country, but the number at work and the number of different roads employing them have risen steadily, with increasing satisfaction on the part of both the Mexicans and the railroads. To April 14, the last date for which figures are available, 104,589 Mexican workers had moved in on the railroads of the country, and more than 52,000 were then at work. Beginning with the few roads in the Southwest and Pacific Coast that were first to employ Mexicans under the new arrangements, the number employing them has increased to 36 in all parts of the country, with more than 24 roads recently requesting quota increases to meet their manpower requirements.

In every important respect the employment of the

citizens of our neighbor to the south has been a success, with benefits to all concerned. Carefully drawn agreements guarantee the Mexicans working conditions and pay equal to those of our native workers, with free transportation to and from their points of departure in Mexico. Other agreements or understandings protect American workers in their jobs today and after the war. The agreements signed by the railroads have been burdensome in some respects, and have caused them trouble and expense, but the railroads have benefited by the labor gained, and our Mexican friends have proved themselves good laborers wherever employed, whether on the track, in the shop, or when assigned to the handling of freight or storehouse material.

Mexico, too, stands to benefit from the arrangement. Through the experience of its citizens on the railways of the United States, it will ultimately have over 100,000 trained potential employees for its own railways, to follow up its present determined efforts, being made with the aid of the United States Railway Mission to Mexico, to put those railways in sound physical condition.

Operating Switches

The Missouri Pacific's analysis of accidents on its lines recently developed that some 50 per cent of the train accidents were caused by improper operation of switches. An analysis anywhere will show that improper switch operation is a highly troublesome source of accidents.

After consideration of the best means of correcting the situation, the Missouri Pacific decided upon the use of diagrammatic and photographic slides, with an accompanying sound recording. The result is a highly instructive film, dealing entirely with the operation of switches, and having the outstanding value of being specific as to the causes of accidents at switches and their remedies. Each rule covering switch operation is graphically illustrated, showing the right and wrong methods, while the sound recording describes how the right method prevents accidents and the wrong method may cause them. A recent accident is graphically depicted and described. In addition, three accidents on other railways are shown, the necessary information having been obtained from I. C. C. reports.

Fifteen projection and sound recording machines have been purchased, one for each division on the system. As soon as possible, further films will be prepared covering violations of rules in other respects that lead to accidents.

The Missouri Pacific has always stressed employee training. However, this and other instances described recently in the *Railway Age* show that the present shortage of experienced help does have at least one advantage. It has stressed the need for employee training on the railways. In peace-time the railways were beginning to lag behind other industries in a scientific approach to this problem, perhaps because the ranks then were loaded down with men of many years' experience. The need was apparently not as pressing when practically every fireman was a qualified engine-

man and every brakeman a qualified conductor. Even under those circumstances, employee training should not have been neglected. Now it is a must.

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Railway Supplies for China

Recent announcements that 39 of a group of 110 Chinese engineers, who are to be trained on American railways, already have arrived in this country, leads to an interesting speculation regarding the influence that this program may have upon the wider adoption and more extensive use of American railway equipment, materials and supplies in China after the war. According to present plans, it is anticipated that the remainder of the trainees will arrive later this year. A group of this size is bound to exert considerable influence in the choice of the materials which enter into railway operation and maintenance.

All of these men, it is said, are English speaking graduate engineers of Chinese colleges with a minimum of three years' continuous experience on Chinese railways. They have been selected for their ability, leadership, scholastic attainments and aptitude for railway work. It is anticipated that all of them will receive special training and practical experience by being transferred periodically from place to place within the United States. The main purpose is to familiarize them with the science of modern American railroading so that, upon their return to their native country at the expiration of their training periods, they will be able to help Chinese railways meet the urgent needs of war and the reclamation and rehabilitation of China.

Apparently, in the course of their training they will be assigned to American railroads with topographic conditions somewhat similar to those of Chinese railway lines. The plan was initiated some time ago by the Chinese government and is being developed through the Chinese Supplies Commission in the United States. A Chinese-American committee of five members is supervising the program along lines laid out by Brig. Gen. Charles D. Young, Deputy Director of the O. D. T., with the cooperation of the Association of American Railroads.

Basically, the plan is not new, since many individuals have been trained on various railways in the United States and Canada, by similar methods, during the last 20 years. Nevertheless, the training of more than 100 Chinese engineers marks a new departure much broader in scope, and one bound to exert a strong influence for the wider adoption and use of American rolling stock, work equipment, tools, railway materials and supplies of all kinds, particularly those items that make for increased efficiency and faster production.

Living up to their proverb which says that a picture is worth a thousand words, the Chinese are blazing new trails by selecting the right pictures for their specially selected trainees. Experience is a thorough teacher, and during their training period these men constantly will be in touch with modern equipment, appliances and methods of all types. The plan has the germ of a new era of railroading in China, with a close relationship of American methods and materials to the development.

Erie Bonds Are Quickly Oversubscribed

Three issues are awarded on unusually close competitive bidding. Road's capital position is excellent as fixed charges are pushed down to \$4,965,000 from \$14,546,710 prior to reorganization

Table I—Capitalization

Table	-Cupitum			
		rganized Compa	ny	
	At Dec. 31, 194 Giving	4,		Prior to Re-
G1-111	Effect to Prese	nt Dec 21 1044	Dec. 22, 1941	Organization
Capitalization ¹ Fixed Interest Debt:	Refinancing	Dec. 31, 1944	Dec. 22, 1941	Dec. 21, 1941
First Mortgage, New York & Erie, 4%, due 1947 First Mortgage, Ohio Division, 3½%, due	\$130,0002	\$130,000	\$2,482,000	\$
1971	17,094,000	17,094,000	18,000,000	*********
First Mortgage, Chicago & Erie, 5%, due	12,000,000	12,000,000	12,000,000	
First Consolidated Mortgage, Series A,			5,955,850	
434 % First Consolidated Mortgage, Series B,				
First Consolidated Mortgage, Series E,	******	74,212,650	74,908,650	*******
3¼%, due 1964 First Consolidated Mortgage, Series F,	13,000,000	13,000,000		
31/8%, due 1990 First Consolidated Mortgage, Series G,	33,900,000		******	
First Consolidated Mortgage, Series G, 31/8%, due 2000	40,000,000			
First Consolidated Mortgage, Series H, 2%, due 1953	5,500,000			
Secured Serial 31/8 % Notes	4,000,0003	9,500,000	14,000,000	
		**********	14,000,000	
TOTAL FIXED INTEREST DEBT, EX- CLUSIVE OF EQUIPMENT OBLIGATIONS Equipment Obligations	\$125,624,000 14,736,000 ⁴	\$125,936,650 14,736,000	\$127,346,500 21,350,000	\$264, 958 ,825 21, 350,00 0
TOTAL FIXED INTEREST DEBT	\$140,360,000	\$140,672,650	\$148,696,500	\$286,308,825
Contingent Interest Debt: Income Mortgage 4½% Bonds, due 2015	50,475,9255	50,475,925	52,642,425	
TOTAL DEBT	\$190,835,925	\$191,148,575	\$201,338,925	\$286,308,825
Capital Stock: Preferred Stock, Series A, 5% (\$100 par)	\$40,340,523	\$40,340,523	\$38,999,223	\$
First and Second Preferred, non-cumu- lative, 4%				63,761,400
Common Stock, (no par—stated value	98,231,715	98,231,715	97,832,029	
Common Stock (\$100 par)				151,106,700
TOTAL STOCK	\$138,572,238	\$138,572,238	\$136,831,252	\$214,868,100
Total Capitalization ¹	\$329,408,163	\$329,720,813	\$338,170,177	\$501,176,925
Annual Requirements Fixed Charges:		,		•
Fixed Rentals, etc. Fixed Interest	\$484,471	\$514,479	\$1,713,668	\$1,728,315
		5,464,484	5,397,328	12,053,890
TOTAL FIXED CHARGES	\$4,965,276	\$5,978,963	\$7,110,996	\$13,782,205
Contingent Interest ⁸	2,282,951	2,282,951	2,371,039	2,130
TOTAL FIXED AND CONTINGENT CHARGES	\$7,248,227	\$8,261,914	\$9,482,035	\$13,784,335
Capital Requirements and Dividends:				
Sinking Funds: Sinking Funds: First Mortgage, Erie & Jersey R.R First Mortgage, Genesee River R.R Refunding & Improvement Martgage	\$	\$	\$	\$83,358
First Mortgage, Genesee River R.R Refunding & Improvement Mortgage				67,398 359,745
First Mortgage, Ohio Division	180,000	180,000 300,000	180,000 300,000	180,000
First Consolidated Mortgage, Series F	369,500		300,000	
General Mortgage ⁸	263,212	263,212	263,212	
First Mortgage, Ohio Division First Consolidated Mortgage, Series E First Consolidated Mortgage, Series F First Consolidated Mortgage, Series G General Mortgage ⁸ Redemption of Notes Dividends on Preferred Stock	500,000 2,017,026 ⁹	500,000 2,017,026°	1,949,9619	2,550,456
Total	\$3,329,738	\$3,260,238	\$2,693,173	\$3,240,957
TOTAL ANNUAL REQUIREMENTS	\$10,577,965	\$11,522,152	\$12,175,208	\$17,025,292
NY .				

Excludes capital stock and funded debt held in treasury of the company or pledged.

Payment irrevocably provided for through cash deposit. As of March 15, 1945, all but \$117,000 of these bonds had been surrendered and paid.

Due \$500,000 on March 15 in each year 1946 to 1952, inclusive. Present amount outstanding is \$3,500,000. A maximum of \$4,375,000 of series I 4% bonds due January 1, 1995, will be issued to replace the Series B bonds securing these notes.

Equipment trust obligations were reduced \$502,000 to \$14,234,000 on March 31, 1945.

\$950,000 of Income Mortgage bonds have been purchased for sinking fund purposes since January 1, 1945.

ary 1, 1945.

6 Maximum accumulation 131/2% of principal amount; accumulation within maximum payable in

**Maximum accumulation 13/2% of principal amount; accumulation within maximum payable in any event.

7 Increases annually by an amount equivalent to interest on bonds acquired by sinking fund. Annual payment of \$369,500 and amounts equal to interest on the bonds retired by operation of the sinking fund are contingent upon earnings computed as provided in the mortgage. Sinking fund payments may be used to retire bonds of any series of first consolidated mortgage bonds except Series I.

**Payable if earned, as provided in mortgage.

**Dividends are cumulative up to but not exceeding 15%.

N APRIL 17, the Erie awarded \$79,400,000 of first consolidated mortgage bonds, through competitive bidding, as follows: \$33,900,000 of series F bonds, dated January 1, 1945, and due January 1, 1990, and \$40,000,000 of Series G bonds, dated January 1, 1945, and due January 1, 2000, to Morgan Stanley & Co., and associates, on a bid of 99.389 for a 3½ per cent interest coupon; and \$5,500,000 of series H bonds, dated March 15, 1945, and due March 15, 1953, to Halsey, Stuart & Co., and associates, on a bid of 99.33 for a 2 per cent interest rate. Bidding for the series F and G bonds was unusually close with Halsey, Stuart & Co. naming a price of 99.33 for a 31/8 per cent coupon, a difference of only 59 cents per \$1,000 bonds. The bid on the larger issues represents an interest cost to the Erie of about 3.15 per cent and on the smaller issue of 2.09 per cent.

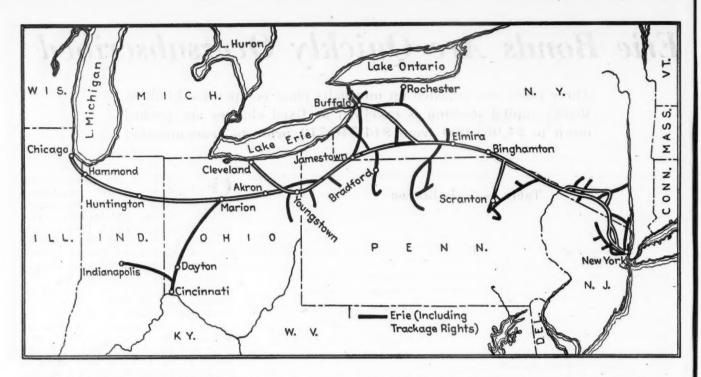
Reoffered by Morgan, Stanley & Co. at 100.65, subject to Interstate Commerce Commission approval, the series F and G bonds were quickly oversubscribed and the subscription books closed. The series H bonds were re-

offered at 100.

Purpose of Issue

Proceeds received from the sale, \$78,911,621, exclusive of accrued interest, together with company funds, will be used to redeem as soon as practical le \$5,500,000 of secured 31/8 per cent notes, dated March 15, 1943, and due March 15, 1953, at 102 and accrued interest; and, on July 1, 1945, the entire \$87,185,500 issue of first consolidated mortgage series B 4 per cent bonds due 1995, at 105 and accrued interest. These latter bonds, which were issued in 1941 at the time of the Erie's reorganization, are held as follows: \$1,723,000 unpledged in the company's treasury; \$11,250,000 pledged as collateral to secure \$9,000,000 of serial 31/8 per cent notes (of which \$5,500,000 are redeemable as set forth above and are secured by \$6,875,000 of series B bonds and \$3,500,000 are non-redeemable and are secured by \$4,375,000 of series B bonds); \$73,392,500 in hands of the public; and \$820,000 held by the Chemical Bank & Trust Co.-\$5,000 as scrip agent, against outstanding scrip for series B bonds, and \$815,000 as exchange-depository, for distribution to old creditors.

The Erie proposes to issue, in conjunction with the sale of the series F, G and H bonds, not exceeding \$4,375,-000 of first consolidated mortgage 4 per



cent bonds, series I, and is seeking consents from holders of the \$3,500,000 of non-callable secured serial notes, to the substitution of series I bonds for the series B bonds pledged as security.

Reduction in Capitalization

When the Erie emerged from re-ceivership on December 22, 1941, its fixed debt, exclusive of equipment obligations, had been cut from \$264,958,825 to \$127,346,500, a decrease of \$137,612,-325 or 52 per cent. Fixed interest, rentals, etc., had been reduced from \$14,546,710 in 1937, the last complete year of the old charges, to \$7,110,996, a decrease of \$7,435,714 or 51 per cent. Between then and December 31, 1944, the railroad succeeded in further reducing fixed charges to \$5,978,963. Now, by means of the present refunding operation, last year's refunding, debt retirement, etc., annual fixed charges have

been pushed down to \$4,965,276, a total reduction, as compared with 1937 charges, of \$9,581,434 or 66 per cent.

Table I herein shows in detail the Erie's capitalization and annual requirements prior to reorganization, immediately after reorganization, at December 31, 1944, and after giving effect to the present refinancing. Footnotes indicate reductions in capitalization that have taken place or have been provided for so far this year. A summary of earnings for the ten years ended De-cember 31, 1944, is presented in Table

As will be noted, the Erie has no important near-term maturities. The secured serial notes mature \$500,000 annually until 1952, followed by the new \$5,500,000 of series H bonds due in 1953.

The road's next maturity will be in 1964, almost 20 years hence, when the \$13,000,000 (less sinking fund retirements) of first consolidated 31/4 per cent series E bonds will come due.

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In addition to the funded debt listed in the table, the company was obligated, as of December 31, 1944, to pay the State of New York over a period of years \$3,488,718, with interest, in respect of grade crossing eliminations. There were also outstanding as of the year-end, \$417,000 of obligations of lessor companies and \$1,197,890 par value of capital stock of lessor companies, the charges in connection with which are included as part of total fixed charges under rent for leased

There are \$2,913,000 of bonds of the Buffalo Creek Railroad guaranteed as to principal, interest and sinking fund jointly by the Erie and another proprietary company. In addition, the company is liable with other proprietary railroads, as lessees, with respect to principal and interest on \$50,000,000 of

Table II—Summary of Earnings

Years	Railway Operating Revenues	Railway Operating Expenses	Operating Ratio	Net Railway Operating Income	Income Available for Fixed Charges ¹	Fixed Charges ²	Contingent Charges ²	Net Income
1944	\$156,720,899	\$109,122,118	69.63	\$16,324,332	\$17,894,120	\$5,978,963	\$3,691,788	\$8,223,369
1943	157,893,223	104,127,772	65.95	19,807,691	20,490,838	6,125,483	4,085,090	10,280,265
1942	133,353,572	84,642,470	63.47	24,372,831	24,982,265	6,784,311	3,295,218	14,902,736
1941	106,845,421	72,149,109	67.53	20,931,583	21,778,543	13,782,205	127,466	7,868,872
1940	86,606,613	61,662,046	71.20	13,853,996	13,977,835	13,958,672	4,900	14,263
1939	81,217,363	59,372,910	73.10	11,464,135	12,148,915	13,593,536	4,900	1,449,521*
1938	69,509,060	56,103,282	80.71	3,214,328	3,595,948	14,368,842	4,900	10,777,794*
1937	83,925,726	60,997,804	72.68	13,614,008	14,118,317	14,546,710	4,900	433,293*
1936	85,005,111	58,882,551	69.27	16,338,791	16,910,815	14,710,901	4,900	2,195,014
1935	75,126,702	54,793,414	72.93	12,960,726	13,884,626	14,732,126	4,900	852,400*

Deficit.

The company was in reorganization from January 18, 1938, to December 22, 1941.

Federal income taxes were accrued only in respect of income for the years 1936, 1941, 1942, 1943 and 1944. For these years, federal income and excess profits tax accruals were as follows: 1936—\$30,000; 1941—\$1,410,233; 1942—\$10,717,656; 1943—\$17,549,958; 1944—\$11,818,074. Such federal income taxes have been deducted before arriving at the amounts shown under the heading Income Available for Fixed Charges.

Total fixed charges in this table from January 1, 1935, to December 22, 1941, include fixed interest charges on the debt of the company and rentals for leased roads as they existed from time to time prior to reorganization on December 22, 1941. For the period from December 22, 1941, to December 31, 1944, they include fixed interest charges on the debt and rentals for leased roads as they existed from time to time subsequent to the reorganization.

Includes income applied to sinking funds as follows: \$15,140 in 1941 and \$563,212 each year in 1942, 1943 and 1944. The First Consolidated Mortgage and General Mortgage require that a Capital Reserve Fund be provided for out of available net income. Amounts credited to this fund for 1942, 1943 and 1944 were:

1942 1943 1944 \$2,667,071 \$3,157,864 \$3,134,418 1.640.886 1,368,826 1,725,581 \$1,026,185 \$1,789,038 \$1,408,837 Appropriations from income credited to Capital Expenditures Fund Reserves ...

bonds and interest and sinking fund payments on \$30,048,000 of bonds of the Chicago & Western Indiana. The company also has guaranteed the payment of principal and interest on \$400,000 of the Blossburg Coal Company first mortgage 6 per cent bonds, due July 1, 1937, owned by a wholly owned sub-

sidiary of the company.

Prior to its reorganization, \$1,484,800 of the New York & Greenwood Lake Railway prior lien 5 per cent bonds were issued and guaranteed by the Erie and have matured. Of these, \$1,461,700 have been acquired by the company and pledged under the first consolidated mortgage. For payment of the remaining \$23,100, together with all interest thereon, \$32,143 has been deposited in trust with the trustee under the mortgage securing these bonds, pursuant to decree of the United States District Court of New Jersey, dated April 3, 1944.

Taxes

The Erie's tax burden has increased materially in the last three years. Total taxes in 1940 of \$6,984,241 and in 1941 of \$9,175,224 increased to a peak of \$27,045,964 in 1943 and to \$24,015,419 in 1944. Taxes in 1944 were divided \$7,822,081 for state and local taxes, \$11,818,074 for income and excess profits taxes, \$4,084,763 for unemployment and railroad retirement taxes, and \$290,501 capital stock and miscellaneous taxes.

f

The \$7,822,081 accrued for state and local taxes includes \$3,071,314 paid in 1944 to the State of New Jersey for interest on defaulted state taxes for years 1933 to 1940, inclusive. Following a decision last June by the New Jersey court of errors and appeals holding unconstitutional the cancellation of interest penalties on delinquent railroad taxes, provided for in the New Jersey Railroad Tax Settlement Act, the Erie paid the State \$3,083,952 which, together with previously tendered certified checks, constituted payment for all amounts which it admitted owing.

The state brought suit against the company in October, 1944, for \$3,008,-767, and interest from September 1, 1944, involving questions as to the application of payments to principal or interest, date of credit for checks not cashed when tendered and rate of interest applicable. The suit, which involves other railroads also, is being contested.

Certain bondholders of the New Jersey & New York Railroad, a separately operated subsidiary in reorganization since 1938, are claiming that the Erie is liable for unpaid New Jersey taxes (and interest) assessed against that road, the trustees of the property not having had sufficient income to meet operating expenses in full. About \$600,000 is involved and the Erie is contesting the claim.

No federal income taxes were paid for any of the years 1934 to 1940, inclusive, excepting 1936, for which a compromise settlement of \$30,000 was made. In this connection, it is to be noted that fixed charges and contingent interest varied between \$14,737,026 and \$13,598,436 during 1935-1941, and were reduced under the reorganization plan and by debt retirement to \$9,053,344 in 1942, \$8,421,535 in 1943, and \$8,261,914 in 1944. If such reduced charges had been in effect during 1935-1941, substantial income taxes would have had to be paid. The company uses the invested capital method in computing its liability for excess profits taxes.

The Company

The Erie's history begins with the incorporation of the New York & Erie Railroad Co. in New York by an act of legislature passed in April, 1832. The original purpose of the railroad was to provide transportation in the southern tier of New York State to permit these counties to compete on equal terms with northern counties served by the recently completed Erie Canal.

Construction began at Deposit, N. Y., in 1835 and the road from Dunkirk on Lake Erie to Piermont on the Hudson river was opened for operation in 1851. Subsequently the line was extended through acquisition, lease and construction to form the present system extend-

ing from New York harbor to Chicago, which was placed in operation as a through service in 1883. The present company was incorporated in New York

in 1895.
On January 18, 1938, the company filed a petition under Section 77 of the Federal Bankruptcy Act and on May 7, 1938, trustees were duly qualified. The Nypano Railroad, a wholly owned subsidiary, also filed under Section 77 and the same trustees were appointed. On June 16, 1941, a plan of reorganization covering both companies was confirmed in the courts and on December 22, 1941, the properties were returned to the re-

organized company.

While the trustees were in possession of the company, they acquired all of the properties of the Cleveland & Mahoning Valley Railway, the Nypano Railroad, the Youngstown and Austintown, and the Westerman Coal & Iron Railroad, which together aggregated 551 miles between Salamanca, N. Y., and Marion and Dayton, Ohio, and between Cleveland and Youngstown, Ohio. The Chicago & Erie Railroad, extending from Marion to the Indiana and Illinois state line, near Hammond, Ind., as well as the properties of eight subsidiaries owning lines substantially all within Pennsylvania, were acquired at the time of reorganization. Subsequently, properties of twelve subsidiaries and leased lines in New Jersey and one in New York were conveyed to the company.

As a result of these acquisitions and certain abandonments, the owned mileage of the company increased approximately 1,163 miles in 1941-1944, with a corresponding reduction in mileage operated under lease, for the account of others, or operated as a result of stock control.

The Erie is one of the four through trunk lines between New York and Chicago. The company operates 2,243 miles of road, of which 2,004 miles are owned, 102 miles are leased and 137 miles are operated under trackage rights. These properties are located in New York, New Jersey, Pennsylvania, Ohio, Indiana and Illinois. The company owns a direct line from New York harbor to Chicago, excepting approxi-mately 28 miles in New Jersey and one mile in New York, which are operated under lease from subsidiary companies controlled through stock ownership, and approximately 20 miles from Hammond to Chicago, which are operated under trackage rights from the Chicago & Western Indiana, in which the Erie has a 20 per cent proprietary interest. New York City and other New York harbor points are reached from the company's terminals on the Hudson river at Weehawken and Jersey City, N. J., by ferry, car float and lighter. The main line from Jersey City to Chicago runs through highly industrialized territory reaching Binghamton and Elmira, N. Y., Youngstown, Akron, Marion and Lima, Ohio, and Hammond. Branch lines reach the Pennsylvania anthracite fields in the area of Scranton and Pittston and other branches extend to or through Bradford, Pa., Rochester, Buffalo and Niagara Falls, N. Y., and Cleveland and Dayton, Ohio. In 1943, the latest year for which comparative figures are available, the lines operated by the company showed the highest average density of traffic of any of the larger railroads in the eastern district.

Equipment Owned

As of December 31, 1944, the number of units in the company's locomotive, floating and service equipment, with the number held under equipment trusts shown in parentheses, was as follows: 751 steam locomotives (10); six Dieselelectric freight locomotives (6); twelve Diesel switching locomotives; one gaselectric locomotive; 26,031 freight cars (11,294); 768 passenger cars (242); 236 floating equipment (1); and 1,083 service equipment. As of March 31, 1945, equipment costing \$39,578,922 was covered by \$14,234,000 of outstanding equipment trust obligations.

As of December 31, 1944, the age of equipment was as follows:

Year	Steam Loco- motives	Diesel Loco- motives	Freight Cars*	Passenger Cars
1-5		6	4,262	7
6-10		7	1.246	141
11-15	10	1	6,474	187
16-20	152	5†	3.110	226
21-25	60		5,249	88
over 25 .	529		5,331	119

* Excluding 359 cabooses. † Includes 1 gasoline locomotive.

During the past five years, 105 heavy steam freight locomotives installed between 1927 and 1929 have been rebuilt incorporating such major changes as the installation of locomotive beds with cylinders cast integrally and improved lubrication devices, resulting in an in
(Continued on page 756)



Rhine River Railroad Bridge at-Wesel from West Bank of River (Engineering Dept., 2nd M. R. S. Photographs)



(Above) Pier at River's Edge Showing Piling, Special Truss Construction and Meter Beams, (Below) Eastbound Passenger Train on Rhine Bridge

Railroad Over the Rhine

Single-track bridge, 1,752 ft. in length is constructed in record time to handle Second Military Railway Service trains into Germany

By CAPT. E. J. PHILLIPS, TC Second Military Railway Service

RMY Engineers, cooperating with the Transportation Corps' Second Military Railway Service, completed the first railroad link across the Rhine on April 8. The connection consisted of a 1,752-foot single-track bridge over the Rhine river, a 463-foot bridge spanning a nearby canal, approximately two miles of connecting track, and rearrangement

and provision of yard facilities at Wesel and Buderich, Germany. Starting construction on March 29, at 6 p.m. and working night and day, Army Engineer troops had the main bridge ready for traffic 10 days, 4 hours 45 minutes later. Twenty-five minutes after the bridge was declared open the Military Railway Service operated the first train across this last "barrier" to Berlin and moved the train east for unloading.

Why Wesel?

Unlike civilian projects of this type, the location of military railroad bridges is often decided upon on short notice, depending upon the developments in the tactical situation. In thinking over the problem before the actual crossing by combat troops, preference had been given to locating the first railroad bridge at Duisburg, Dusseldorf, Cologne or Wesel, with Wesel as fourth choice. It was fully expected that new bridges would have to be built. However, in pushing toward the Rhine, the First Army established the first bridgehead by capturing a railroad bridge near Remagen, south of Cologne, on March 7.



steps were immediately taken to exploit he use of this bridge for railroad trafic by rehabilitation of railroad lines on he west bank giving access to the ridge. Then, on March 17, the Remaen span collapsed. Planning by the Transportation Corps railroad staff reerted to the original blueprints. On March 22 the Third Army crossed the Rhine south of Mainz. The Second Britsh Army crossed the river north of Wesel on March 23 and 24. The Ninth Army moved over the Rhine south of Wesel on March 24, 25 and 26. Then he envelopment around the Ruhr was completed leaving Duisburg, Dusselforf, and Cologne still in enemy hands, but with American armored columns sweeping rapidly into the heart of Ger-The railroad crossing of the Rhine would be at Wesel.

Locating the Bridge

Decision on the actual location of the bridge was given to the Army Engineers at 10 p.m. on March 26. Reconstruction of the old destroyed railroad bridge at Wesel, or use of its piers for a new bridge, was rejected because of its former excessive height and length (3,500 feet), and the damage it had suffered. A point 1,500 feet upstream from the old railroad bridge was selected, adacent to the piers and wreckage of a former highway bridge that the Germans themselves had planned to use, and partially completed, as a dual highay and railroad structure. Here, partially completed approach tracks and embankments were available, connections could be made to Wesel Yard, some protection from floating debris could be provided by the wrecked highway bridge and an estimated two weeks could be saved as compared to reconstruction at the old railroad bridge site.

Placing the Troops

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With the location of the bridge deided upon, the limits of jurisdiction of the 708th Railway Grand Division were set as the west bank of the Rhine, the 729th Railway Operating Battalion to operate up to Buderich Yard. During the construction period, these units cooperated with the Army Engineers in expediting the movement of materials up from rear areas and in providing night and day switching service with six Diesel engines in the material marshalling and bridge construction area. The 707th Railway Grand Division and 720th Railway Operating Battalion were moved up and over the rive to be ready to handle traffic the instant the bridge was open. Maintenance of way men from the two operating battalions were utilized to rearrange and rehabilitate the yard facilities at Buderich and Wesel. At Buderich, where four yard tracks were available, the junction of two double-track main lines was rearranged to give eight tracks. At Wesel, originally a fourteen-track yard, the existing connection required a back-in movement

to the yards for eastbound trains. A new connection, transforming the layout to a typical railroad wye was provided to permit trains to head directly into the yards. Also, a straight track connection was provided, across the yard lead, to the main line to Munster to handle through traffic, and portions of the connecting tracks previously installed by the Germans were straightened.

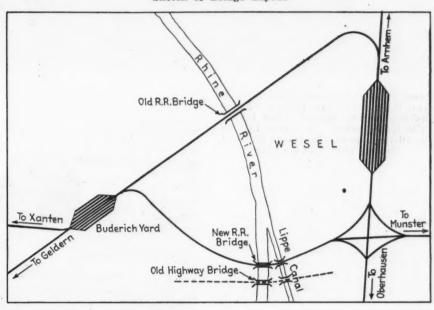
Bridge Construction

The bridge construction decided upon is a semi-permanent structure, of 23 spans consisting of piling at the base, then a special prefabricated steel pier structure utilized by the United States Army and finally, meter-beams, deck and rail (meter-beams are rolled steel I-beams one meter in depth, developed by the Germans and rolled for them by a plant at Luxembourg). The length of the bridge is 1,752 feet of which 1,074

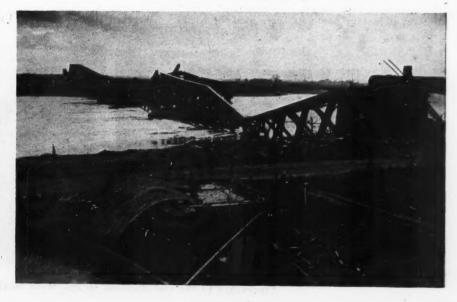
feet are over water, 452 feet part of the west approach and 226 feet part of the east approach. Total weight of the bridge is 2,140 tons. Piles, driven to a penetration of 30 feet, were placed in groups of 21 or 24 for each pier. On short spans two meter-beams were used under each rail, and on the long span, three meter-beams under each rail, giving a total of 94 meter-beams, and a total of 126 including those used on the bridge structure over the adjacent canal. Top of rail is 36.67 feet above mean water level bottom of meter-beams 32.37 feet, top of prefabricated piers 18.29 feet, and pile cut-off 16.29 feet above mean water level. Scouring protection is being provided for the piers.

All equipment and material was moved to the site by rail or trucks. Approximately 5,000 cu. yd. of fill were required to get the approach up on the west side and about 700 cu. yd. on the east side, where part of the old highway

Sketch of Bridge Layout



Destroyed Old Railroad Bridge





General View of Construction Area on West Bank—The Little Box-Car Shaped Building at the Water's Edge Is the Field Headquarters. At Upper Left in the Distance Is the Destroyed Railroad Bridge, Barely Discernible

embankment was used. Piling, 70 feet in length, of which 622 were used, were cut and assembled from points in France. Belgium and Germany. The prefabricated steel trestling was assembled in the yards at Geldern while the piling was being driven. Meter-beams, weighing from seven to nine tons, were moved in by rail from three points west of the Rhine. On the bridge and approaches 75-lb. rail was provided.

Approximately 2,400 men were involved in the assembly and construction of the bridge. Five barges, constructed of Navy lighterage pontoons, were used



Wrecked Highway Bridge Upstream from Railroad Bridge





Approaches to the Old Railroad Bridge Were Badly Damaged

Photo b

support skid-rig steam-driven pile rivers shipped from the United States. Five similar barges were used as genal work barges and three others carried cranes and derricks. A total of 780 of the Navy lighterage pontoons each weighing 24 tons, were used during construction. The pontoons were assembled in rear areas in strings of 12 each, brought to a nearby point on trains, unloaded with a two-yard heavy-duty crane and skidded with a bulldozer to the site. At that point, four strings of pontoons were assembled side by side to form a pile-driver barge. Five strings of 12 were joined to form each of the three crane barges, one equipped with a 25ton stiff-leg crane, and two with a twoyard crane each. In addition to the general work barges formed from these pontoons, ten small work barges equipped with air compressors and stiffleg derricks and tugs or hoists were utilized. In driving the piling, all five pile drivers were used continuously. The barges were shuttled into position using six Navy-type NTL medium tugs. In addition one small tug, six "ducks" and seven "sea-mules" were used during the construction. All of this equipment originated in the United States and was shipped to the job. The only piece of equipment used which was found mearby was a catamaran barge. The "ducks" were used to pull piling off the stock piles through the water to the pile drivers, and for general contact and message work and for the handling of personnel.

No Enemy Interference

The bridge construction was difficult because of the speed of current in the 30-foot-deep channel which flows at four to five miles per hour, but was facilitated by almost perfect weather during the first five days and no enemy interference at all during the entire period. Also the Engineers, in conjunction with the advance of the Ninth Army, rehabilitated the railroad line from Munchen-Gladbach to Krefeld to Wesel and had almost unrestricted use of the railroad for hauling in material as desired.

Photo by 708th Railway Grand Division



The First Train Crossed the Bridge at 12:10 A. M., April 9



Wesel Yard from the Station Roof



At 11 p.m. on April 8 a test train, consisting of loaded cars pushed by a Diesel engine, was operated over the

bridge, which was then declared open for traffic at 11:45 p.m. At 12:10 a.m. on April 9 the first train of rations destined for the front moved across the Rhine.

Personnel

Credit for the swift engineering and construction of the bridge structure goes to the men and officers of the 1056th Engineer Group, under command of Colonel James B.

At Buderich, the Xanten Main Line Tracks Were Moved Over to Make Yard Tracks

Cress of Palo Alto, Calif., former regional director of the Railroad Retirement Board for the San Francisco Region.

for the bridge structure Plans were approved by Colonel William T. Elmes, assistant general manager of the Engineering Section, Second Military Railway Service, who also specified the yard and line changes required. Operation over the bridge is controlled by Colonel George J. Mulick, assistant gen-eral manager, Transportation Section, Second Military Railway Service under General Clarence L. Burpee, general manager of the Second Military Railway Service. Second Military Railway Service is part of the railroad organization coming under the jurisdiction of General Carl R. Gray, Jr., director general of the Military Railways on the Continent.

Welded Locomotive Boiler Construction

Railroads themselves must be proponents of all-welded boilers before this type of construction is widely used

RAILROAD men are becoming more and more interested in welded locomotive boilers, and they should be because railroads themselves will have to be proponents of the idea before this type of construction can become even moderately, not to mention, widely used.

In discussing the subject of welded construction for locomotive boilers, a brief review will perhaps be helpful. Electric arc welding, gas welding and forge welding were in use to a partial extent in the construction of new locomotives and the repair of locomotives that were in service in the early part of the 1910 decade.

Early Welds Unsatisfactory

On new work, butt welds in locomotive fireboxes were made first with oxyacetylene and later by electric arc welding, using bare wire electrodes. The same methods were used when maintenance in service required the application of patches in locomotive fireboxes. All of these welds were in the staybolted areas of the firebox and usually gave satisfactory results.

In some railroad shops repairs were made to the shell portion of locomotive boilers by electric arc welding, the welds being made from the outside only.

These welds were not stress-relieved and would not meet the test requirements of present-day codes, nor the procedure rules of the American Welding Society. They were generally unsatisfactory and new cracks soon developed when the locomotives were put back into service.

Such welding was not the only kind of repairs made by electric arc welding. This method was used extensively as a repair tool, sometimes with undesirable results. The use of this welding on boiler shells gave results which were not what might have been hoped for.

not what might have been hoped for.

These conditions caused the I. C. C.
Bureau of Locomotive Inspection to issue orders prohibiting all welding on the pressure parts of locomotive boilers and permitting welding only in the fireboxes as above outlined, with the provision that no firebox welds would be allowed higher than 14 in. below the top of the crown sheet. That restriction stood for quite a long period.

The increasing use of welded construction in boilers and pressure vessels was noted with interest by the Boiler Code Committee of the American Society of Mechanical Engineers and it was further emphasized when a request was received early in 1918 from the

This is an abstract of a paper presented at the March 19, 1945, meeting of the Northwest Locomotive Association in St. Paul, Minn.

Bu JAMES PARTINGTON

Manager, Engineering Department, American Locomotive Company

National Welding Council, which later merged with the American Welding society, for affiliation with the A. S. M. E. in making a study of the subject. At its meeting of March 28, 1918, the Boiler Code Committee appointed a Subcommittee on Welding to draft rules for safe welding practice. In doing that, the usual practice of the boiler code committee was followed.

The members of this committee represented a reasonably complete cross-section of the welding industry, i. e., electric arc welding, gas welding and forge welding as used in railroad, power plant, gas storage and refrigeration equipment.

In January, 1920, the Boiler Code Committee requested the American Welding Society, which had been organized early in 1919, to appoint a conference committee to work with the Boiler Code subcommittee in drafting a set of welding rules. This proved to be a difficult task which required four or five years of intensive effort by the two committees.

Welding Code Adopted

The welding code was finally adopted and first issued for use in the first edition (1925) of the Code for Unfired Pressure Vessels. The welding code rules were added in the code for power boilers in 1931 and in the code for boilers of locomotives in 1942. This welding code and the American Welding Society rules for welding procedure and the qualification of welders have been most helpful in pointing the way for the marked improvement that has taken place in all kinds of welding and in all types of welded construction.

From a request by the Mechanical Division of the Association of American Railroads, it was evident that some railroads were getting to a point where they wanted to have welded boilers and wanted to see the rules in the code for locomotive boilers.

These codes are written on the basic requirements of definite test results and this method has proved satisfactory and adequate for all types of welding.

The early discussions of the committee which was given the job of drafting the rules showed that those rules would have to be as devoid of procedure qualifications as possible because the different types of welding in use at that time had proponents who were particularly en-

thusiastic about their respective types of welding and not enthusiastic about other types. For instance, forge welding was in use—had been recognized by the Boiler Code Committee and given a moderate value. They claimed their method as 100 per cent. Electric arc welding claimed theirs was 100 per cent. Gas welding people knew their welding was 100 per cent, so the committee came to the conclusion that the only way rules could be drawn was to base those rules on required test results. That is the way the code was written; that is the way it stands now. It is a method that fills the bill and covers the situation.

This gives you the background for the welding codes, which many of you are using and which are followed by industry in general as the accepted

First All-Welded Boiler

In the railroad field one of the results of this progress in welding was the building of a welded boiler for a locomotive. The Bureau of Locomotive Inspection permitted the application and use of one completely-welded boiler on a Consolidation-type freight locomotive of the Delaware & Hudson.

This boiler was built in accordance with the rules of the A. S. M. E. Boiler Code for Power Boilers and the design and construction procedure were approved by the Mechanical Division of the A. A. R., the code for power boilers being taken because there were then no code rules for the welding of locomotive boilers in Sec. 3 of the Code. This boiler has been in successful operation on the Delaware & Hudson for nearly seven years. By successful operation, mean that no flaws, cracks, leaks, or any imperfections of any kind have developed in those welded seams, and fortunately the parent metal of the boiler has not developed any cracks, so the boiler has required no repairs, no riveted patches, and still stands today a 100 per cent example of a welded boiler in service doing the job without any repairs being necessary.

No Shell Repairs

The Delaware & Hudson locomotive was in service 6½ years with no shell repairs whatever. Before it was placed in service, the I. C. C. stipulated that it should be set up as a stationary boiler and operated for six weeks. That was done. Then it was mounted on a locomotive and examined every three months for the first year. All the welded seams were carefully gone over. The second year this same procedure was

followed every six months. And subsequent to that, the boiler has been examined yearly. It has been 100 per cent clear of any leaks.

Advantages of Welded Boilers

No additional completely welded boilers for locomotives have yet been built, but a number of railroads at the present time wish to put welded boilers in service. Some of the advantages to be gained by the use of welded boilers for locomotives are:

(1) The elimination of riveted joints which are likely to have some seepage between the boiler plates even when the best possible fabricating technique is

employed.

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(2) Elimination of boiler leaks removes the possibility of cracked sheets which are frequently a major item of maintenance cost especially when high boiler pressures and high operating speeds are involved.

(3) The smooth contour of a welded boiler permits a much easier and an allaround more satisfactory application of the boiler lagging and jacket, and provides this same smooth surface on the inside which contributes to easier and

more satisfactory washouts.

(4) On many modern locomotives the saving in weight of the welded design versus the riveted job is an important item. This saving will vary with the size and type of locomotive and may be from 3,000 lb. to 6,000 lb. for the boiler alone with some small incidental additional saving in weight of lagging and jacket.

(5) The saving in maintenance costs with a welded boiler is likely to be an important item. Take for example the Delaware & Hudson boiler which has been in service 6½ years with no shell

repairs

Steps to Good Welding

You are no doubt questioning how practically 100 per cent welding is attained. The necessary steps to obtain

this result are generally:

(1) The qualification of the shop welding technique, apparatus, electrodes, plate material, etc., by the production of test specimens that meet code requirements for welding procedure. These specimens must meet the tests for tensile strength, elongation, soundness of the weld metal, strength of shear, etc.

(2) The qualification of the welding operators using the welding procedure that has been approved. These tests are specially devised to determine the operator's ability to produce sound welds in the positions involved in the actual welding of the boiler. This is the ground work or preparation carried out before the job is started. Test specimens must be furnished for each boiler and these specimens must meet all of the requirements.

(3) All of the strength welds must be X-rayed and show the required degree of soundness, freedom from inclusion,

or porosity.

(4) After the welded boiler has passed the X-ray examination successfully, it is stress-relieved in a furnace of sufficient size to take the boiler as a unit. This furnace must be under pyrometer control and must show a closely uniform temperature at all points. The test specimens are subjected to the same heat treatment, preferably with the boiler.

(5) After the firebox has been applied and the boiler completed, a hydrostatic test pressure of 1½ times the working pressure is applied and under this pressure all of the welds are sub-

jected to a hammer test.

In the fabrication of a welded boiler nothing is left to chance. All of the Code rules are carefully followed and the result obtained can reasonably be expected to be approximately 100 per cent.

That first boiler was subjected to a hydrostatic test pressure that was a *requirement in the code at that time.

Material Important Factor

In the manufacture of a welded boiler the welding process must be the proper one for the material being welded. Alloy steel requires a different procedure from that employed in welding ordinary carbon-steel boiler plate of 55,000 lb. tensile strength. High-carbon, high-tensile steel also requires a different procedure.

In the fabrication of the Delaware & Hudson welded locomotive boiler, there were several interesting design features. The attachment of the front tube sheet is one. This is designed for easy removal if a new tube sheet should be needed during the life of the boiler. The attachment of the dome on this boiler is by a special construction, and another method has been developed which is considerably simpler yet meets Code rules.

Since the welding codes were issued the amount of welded construction has increased tremendously and greatly improved welding is the rule rather than the exception. In the earlier stages of welding, hand-welding prevailed generally throughout the industry. Today, machine welding is extensively used.

The American Locomotive Company on one order recently produced 100 boilers with the barrel courses welded longitudinally instead of riveted with inside and outside weld straps. These longitudinal joints were machine welded by the submerged process, then X-rayed and stress-relieved. Extremely little cutting out of weld material was required.

We have since supplemented that program with another 115 locomotives on which the barrel courses have the longitudinal seams welded and no inside and

outside weld straps.

A recent report from our welding supervisor was that on 19 sets of boiler courses just welded no cutting out was necessary.

Cutting out is required when the X-ray shows any flaws or inclusions that are of sufficient amount to make

replacement necessary to meet code rules. In the Locomotive Code up to this time, the value assigned to a joint is 90 per cent. In the Power Code they have increased that value to 95 per cent. This is allowable and safe, because the quality of welding, since the codes were first issued, has improved wonderfully and the efficiency and accuracy of the X-ray examinations have been wonderfully improved. A technique is laid down for taking the X-ray picture which has gradually developed as the X-ray machines came more and more into practical use so that today the X-ray of steel plate has become much more nearly an exact science, those who do the job and those who are employed in reading the pictures being specially trained for this work.

The machine welding removes the human element encountered in hand welding and if the procedure is correct a uniformly good weld is assured provided the fitting up is all that it should be. Running a machine at 10 or 12 in. a min., the machine has no ability to judge whether there is a little more space between the sheets than is desired, while in hand welding the feel of the job permits the operator to adjust such things. In machine welding the fitting up should be uniform throughout. If you have too much of an aperture you will run through and have to cut out and re-weld

Samples taken at random with a length of weld cut lengthwise through the weld metal often show more uniform grain structure than is found in the parent metal. Samples showing a homogeneous weld throughout its length are representative of the type of weld material that is being deposited in these

boiler welds.

Welded Boilers Coming

In fabricating several hundred shell courses of locomotive boilers with welded seams, we have put the shop on a satisfactory production basis, but I do not think the locomotive builders are going to dispose of their bull riveters. I do think there are going to be a considerable number of welded boilers built for our railroads in the next few years, and that the welded boiler is going to be a definite item in railroad service, coming into the picture gradually. I believe it will solve a number of present-day railroad problems.

Of the several hundred boilers referred to as having welded shell courses, the longitudinal seams only are welded, the courses being put together with circular seams of the usual riveted con-

struction.

On the Western Front.—Some idea of the immensity of supply movement is clear in the record of the 733rd Railway Operating Battalion in the first 10 days of the year. Following closely General Patton's Third Army, these army railroaders operated more than 500 trains some 16,458 train-miles in the 10-day period.

Wood Preservers Hold Substitute Meeting

Executive committee session replaces annual convention to consider papers and reports and to install officers for the coming year

IN COMPLIANCE with the request of the Office of Defense Transportation that meetings requiring a large amount of travel be eliminated, the American Wood-Preservers' Association, this year, cancelled its annual convention and substituted therefor a meeting, at Chicago, on April 24, of the Executive Committee of the organization, which was closed to the membership. At the morning and afternoon sessions of this meeting of the committee, papers on a variety of subjects relating to the work of the industry, and reports of standing and regular committees, were received and considered. However, there was one important departure from the practices that have been followed generally in the conduct of the meetings of the association, in that, since there was no opportunity for the membership to discuss and vote on the reports, it was arranged that a letter ballot be taken on all recommendations of committees for the adoption of tentative and permanent standards. morning and afternoon sessions were presided over by Walter P. Arnold, technical director, Wood Preserving division, Koppers Company, Orrville, Ohio, as president.

While there was no presidential address, as such, as in previous years, outlining the activities of the association, President Arnold presented a report of his stewardship to the Executive Committee, in which he reviewed the events of the past year.

The secretary's report showed that despite the still further drains that have been made upon the membership by military requirements, by the death of 7 members, and by other causes during the year, whereby 29 members were lost to the association, there was a net gain of 57 in the membership, bringing the total to 867, an all-time high for the association.

Election of Officers

The Executive Committee announced the election of officers for the ensuing year as follows: President, J. H. Bremicker, inspector, Pennsylvania, Philadelphia, Pa.; first vice-president, R. H. Rawson, consulting timber engineer, Portland, Ore.; second vice-president, A. J. Loom, general superintendent timber preservation and treating plants, Great Northern, Brainerd, Minn.; treasurer (re-elected), H. L. Dawson. Members of the Executive Committee, F. W. Gottschalk, technical director, American Lumber & Treating Co., Chicago; and G. A. Haggander, assistant chief engineer, Chicago, Burlington & Quincy, Chicago.

In its roort, the Preservatives committee recommended the withdrawal from the Manual of the float test for preservatives and of the specific gravity tables for zinc chloride. The former has become obsolete and is no longer included in any of the standard specifications, and the latter have been found by experience to be unreliable when applied to used solutions of zinc chloride. The committee also reported that the specification for zinc chloride is under study with the view of revision to a form corresponding with the current specifications for other salt preservatives. The committee also offered for adoption a tentative standard for creosote-petroleum solutions, which refers to the creosote and petroleum standards for the materials and which provides for a minimum of 50 per cent of creosote.

Treatment Specifications

For the entire period of its existence the association has retained as one of its important objectives the improvement, the co-ordination and the standardization of treatment practices through the development and perfection of specifications for the treatment of various species of woods. In recent years this activity has been given a place of prominence in the annual programs of the association. In pursuance of this objective, the committee that has been studying the pressure treatment of southern pine ties and lumber recommended a number of revisions in the tentative specifications that were adopted three years ago. These revisions referred principally to the temperature of the preservative during treatment, to the temperature and time of steaming after completion of treatment, and to the

retention of preservative for both normal and special service.

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Last year the association adopted as tentative standard a specification for the pressure treatment of oak ties and lumber, but instructed the committee that had this subject under study to continue its investigations with respect particularly to penetration and retention of preservative and to the treatment of more resistant varieties of oak, such as lowland oak. The report contained numerous changes along these lines, all of which were recommended for adoption.

The committee that has been studying the possibility of treating intermountain Douglas fir and western hemlock in accordance with the specifications for treating Pacific Coast Douglas fir, reported that it is possible to treat these species under the Douglas-fir specifications, provided certain changes and additions are made, principally with respect to the penetration and retention of the preservative, and provided that each species is treated separately.

A number of revisions to the tentative standard for the pressure treatment of western red cedar poles, which was adopted two years ago, were recommended in the light of further data on the treatment of this highly resistant wood. These related to the moisture content and conditioning preparatory to treatment; to the time and temperature limits for the final steam bath; to the penetration and retention of preservative; and to inspection. The committee presenting the report recommended that the penetration requirements be lowered from 90 to 85 per cent of the sapwood thickness, and that the requirement for net retention be that which "will result from attaining the specified penetration.'



One Span of a Ballast-Deck Pile Trestle Containing 11 Laminated Stringers, 7 In. by 16 In. by 14 Ft., Installed in 1944

Several changes were recommended in the tentative instructions for the preservative treatment of wood, relating to the measuring and weighing equipment for plant use, which were adopted last year. Extensive revisions, including the insertion of a number of tables, were also offered for determining the volume of round forest products.

Study Laminated Members

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During the year a special committee was organized to study preservative and fire-retardant treatments of laminated products, that is, plywood and glued-up fabrication. Among other studies, tests were made at the University of Washington on 18 glued laminated bridge stringers, made by Timber Structures, Inc. There were six sets of three stringers each, three of the sets being made of nominal 1-in. laminations, dressed to 34 in. All of the stringers in these three sets were 7½ in. by 18 in. by 16 ft. The remaining three sets were of nominal 2-in. laminations dressed to 15% in., and the stringers were 7½ in. by 15 in. by 16 ft.

The glue used, which was the same for all of the stringers, was a phenolicresin glue, accredited for use under exposure to weather and water. At the time of gluing, the laminations had a moisture content of 12 to 15 per cent. One set of three stringers from both the 1-in. and 2-in. laminations was incised and creosoted, one set from each was incised but not creosoted, and one set was neither incised nor creosoted, the purpose being to observe the relative effects on strength of incising and creo-

soting and of incising only.

These beams were tested to destruction under third-point loading on supports 15 ft. center to center. The committee reported that they proved to be considerably stiffer than sawn beams of the same dimensions, and that little difference was observed in this respect between the treated and untreated beams. The creosote treatment did not appear to have any effect on the glue lines, since there was no evidence of de-lamination or of weakness in the glue lines. Shear was invariably in the wood and at times crossed glue lines from one lamination to the next. The shear strength seems to be about the same in laminated glued beams, whether incised or unincised, treated or untreated, and about 25 per cent higher than in sawn beams. The committee cautioned, however, that the tests were indicative rather than conclusive and that further tests and study are required before definite conclusions can be drawn.

Service Records

During the entire time since its organization, in 1904, the association has emphasized the value of the knowledge gained from a study of the actual performance of treated timber, and has gathered and published an immense volume of such data, a great deal of which, unfortunately, has not been co-

ordinated and analvzed in such a way as to make it of the greatest value to those who are interested in the study of the possibilities of treated wood. Among these data, the in-formation gathered with respect to tie service has probably been of the greatest practical value, partly because ties constitute so large a part of the timber created each year and partly because of their widespread use.

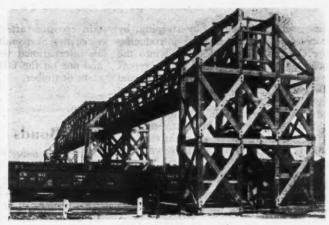
This year, the Committee on Tie Service Records, of which W. J. Burton, assistant to the chief engineer, Missouri Pacific, was chairman, presented reports on ties placed in test sections in tracks of the Chicago, Milwaukee, St. Paul & Pacific and the Great Northern. These tests, which cover a wide variety of timber and preservatives, have been under observation for periods ranging up to 33 years, and are yielding data on the service life of

In the Milwaukee tests, the life of un-

treated ties ranged from 6.4 years for maple to 13.3 years for Douglas fir, while the life of treated ties ranged from 13.4 years for chestnut treated with zinc chloride to 48 years for maple treated by the Card process and to 46 years for red oak treated with semi-refined paraffin oil.

In addition, so few of the red oak ties treated by either the full-cell or the Rueping process have failed after 33 years service that no estimate of their probable average life can yet be made.

The report covered two test sections on the Great Northern, one including 44,139 hewn tamarack ties treated with an 80-20 creosote-coal tar solution by the Lowry process to a retention of 6¾ lb. per cu. ft. These ties were placed in the track in 1917, and by 1944, after 27 years, 43,121, or 98 per cent of the ties had been removed. The average life of the ties replaced was 23.48 years. The other test section included western hemlock, western larch, Douglas fir, true fir, spruce, white pine, ponderosa pine and aspen, aggregating 1,800 ties. They were treated by the Lowry process with an 80-20 creosote-coal tar solution, to a retention of 634 lb. and were placed in the track in 1910. By 1944, after 34 years, 1,085, or 60 per cent, of these ties had been renewed, giving an aver-



Pedestrian Bridge Over 14 Tracks of the D. & R. G. W. Towers and Truss Members Were Given Fire Retardant Treatment and Were Assembled with Timber Connectors



ties that are of high Pressure-Treated Sheathing and Roof Members Will Have value.

Pressure-Treated Sheathing and Roof Members Will Have Long Life and Cost Less to Maintain Than Untreated Wood

age life of 27.36 years for the ties that have been replaced.

The Committee on Bridge and Structural Timber, of which T. H. Strate, division engineer, C. M. St. P. & P., was chairman, gave interesting and detailed data on the service life of a creosoted ballasted-deck trestle, near Dean Lake, Mo. This bridge, which consisted of 73 bents, was one of the first two ballasted-deck creosoted trestles on the Atchison, Topeka & Santa Fe. It was completed in 1899, and in 1910 when the line was double tracked, the deck was raised 4 ft. on pony bents that rested on the original caps. This structure was replaced in 1941, after 42 years' service, and other than caps, more than half of which had been renewed, replacements of material in this bridge had been surprisingly light.

A report on post service records included such species as southern yellow pine, northern white cedar, red pine, Douglas fir, Port Orford cedar, cotton-wood and lodgepole pine, a few of which were untreated. Treatment was given with standard and commercial preservatives and with chemicals such as sodium bichromate, sodium chromate, sodium fluoride, mercuric chloride, arsenic and used crank-case oil. These treatments were applied by pressure

processes, by brushing, by steeping, by hot-and-cold baths and by introducing the chemicals into holes bored into the posts. The posts included in the report were set in Mississippi, Wisconsin and Oregon, most of them being in test installations, although a few were selected from service installations. The variations in woods, in treatments and in preservatives were so great that the information contained in the report cannot be stated briefly.

A report on the uses of treated wood for car lumber gave a detailed list of more than 5,400,000 ft. b. m. of treated wood used in 1944 by 11 roads, for the construction or repair of freight cars, including creosoted and salt-treated material for decking, nailing sills, coal-car and stock-car sides, running boards, saddle blocks, stringers, furring, stockcar superstructures, ballast-car sides, and floor racks and ice bunkers in refrigerator cars. This was approximately 2,400,000 ft. b. m. more than was reported for 1943. In addition, three roads were reported to have used an unspecified amount of treated lumber for the construction or repair of 1,540 cars, and two other roads were reported to have used treated material for certain car members, although the number of cars or the amount of material involved

Other Papers and Reports

was not given.

In a report on diversified uses of treated wood, an overhead pedestrian bridge crossing 14 yard and main-line tracks was described. This structure was built by the Denver & Rio Grande Western, at Denver, Colo. Prefabricated Douglas fir, treated with a fire retardant was used for all parts of the structure, except the walkway deck which was creosoted. A number of examples were also given of roof construction in which the rafters, collar beams and sheathing were given fireretardant treatment. Among the new uses, examples of laminated bridge stringers were mentioned. One span of a timber trestle containing 11 laminated stringers is shown in an accompanying illustration.

Papers of interest to the railways include one by C. D. Turley, engineer of ties and treatment, Illinois Central, on Why Ties Are Removed From the Track. Another described the methods followed in the manufacture of laminated members, and announced the use of laminated stringers in one test span of a timber trestle by each of two roads, and the use of laminated caps by one of these roads. One of these spans is now in service, and the other will be completed by the middle of 1945. The caps in the structure still to be completed will have three laminations of 34-in. red oak on each bearing face, while the bodies of the caps will be yellow pine.

Other papers of interest to railway officers include the third in a series on the Biological Environment in Treated Wood, in Relation to Its Service Life. reporting the results of studies on cer-

tain crossties after some years of service; the Sixteenth progress report on an international termite exposure test; and one on the fastening and reinforcement of timber.

Erie Bonds

(Continued from page 747)

crease in their availability. These locomotives, together with the Diesel freight locomotives delivered in 1944, are sufficient in normal times to handle all of the company's main line freight business. Ten heavy passenger locomo-tives purchased some 25 years ago have been similarly rebuilt and have been further improved by the addition of roller bearings, boosters and tenders of large capacity.

Maintenance

The company's equipment, roadway and structures are reported to be in good condition and to have been adequately maintained. Ninety-two per cent (2,141 miles) of all rail in main line tracks is 110 lb. or heavier, and 899 miles of these tracks are laid with 130 or 131 lb. rail.

Substantially all cross-ties are tie plated and treated and the entire main line and more important branches are ballasted with crushed rock or slag. Because of the difficulty in securing certain materials and adverse labor conditions, the company, with Interstate Commission authority, Commerce charged maintenance of way and structures expense in 1944 with \$906,702 and created a reserve fund of that amount represented by \$800,000 U. S. Treasury certificates of indebtedness, and \$106,-702 in cash on deposit in a special account, to pay for the deferred maintenance when materials become available. It is expected that this will be done in 1945. A similar provision was made for deferred maintenance for 1943 amounting to \$891,461, all of which was expended in 1944.

În 1942, 1943 and 1944, the company included in maintenance of equipment expenses, \$1,165,470, \$2,532,937 and \$1,731,219, respectively, for the amortization over a five-year period of certain equipment acquired or constructed to further the war effort.

Business

Approximately 85 per cent of the Erie's operating revenues in 1944 was derived from freight traffic. Of the 1944 freight revenues, about 56 per cent was derived from manufactures and miscellaneous, 8 per cent from anthracite coal, 7 per cent from bituminous coal, 10 per cent from products of agriculture and 6 per cent from less-than-carload traffic. The company carries a diversified traffic in commodities. Items which in 1944 \$2,000,000 of gross produced over revenues included anthracite coal, bituminous coal, iron and steel products, petroleum and its products, fruits, meats, and automobiles and auto-trucks knocked down. In 1944 the company originated about 36 per cent, terminated about 53 per cent, and acted as bridge line for about 27 per cent of the total tonnage handled by it, as compared with about 38, 58, and 20 per cent, respectively, in

During 1944 thirty-four new industries were reported established at points served by the Erie, of which twentynine are expected to operate after the war. It is estimated that these new industries will produce freight revenue for the railroad of about \$725,000 annually.

The Outlook

Like all railroads, the business of the Erie is dependent upon the productive activity of other industries. In this connection, the company is fortunate in serving so highly diversified a territory. In between New York, with its rich industrial areas on the east, and Chicago, with its packing houses and heavy industries on the west, are concentrations of agriculture, rubber, coal mining, steel production and various other segments of our industrial picture. This diversification heretofore has tended to keep the Erie's business on a reasonable level and should continue to do so. After the reconversion period, the railroad should benefit in a large measure for a number of years while these many industries take part in filling the large demands for consumer goods and industrial products expected in the post-war

COMMUNICATION...

A Mixup in Percentages

WASHINGTON, D. C.

TO THE EDITOR:

The article which appeared in the Railway Age of March 24, 1945, page 541, dealing with increased traffic on the Santa Fe, appears to be in error as to the per cent of increase in traffic handled. The increase in traffic gross ton-miles should be 200 per cent instead of 300 per cent, as shown. The volume of 1944 traffic was three times that of 1939, but the increase in traffic, which is the difference between 1939 and 1944, was a little more than eight billion ton-miles over 1939.

Similarly, in the case of net ton-miles, the increase, i.e., the difference between the 1939 level and the 1944 level was approximately four billion, or 400 per cent of the 1939 volume, not 500 per cent,

as stated in the article.

These errors were undoubtedly inadvertent and do not affect the general value of the contributions, but amount to over-statement not in line with the Age's reputation for accuracy.

HERBERT ASHTON

Railroads-in-War News

Country Is Close to Freight Priorities

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Army more alert to value of railroads to enemy than to us, says O. D. T. head

If Selective Service had taken the "last 40,000" railroaders in the 19-to-29 age brackets its action would have brought on transportation priorities "within 30 days," Director J. Monroe Johnson of the Office of Defense Transportation said in an address at the April 18 dinner meeting of the Traffic Club of Washington, D. C. As noted in the Railway Age of March 24, page 555, the 40,000 will not be drafted if local boards go along with additional deferment certifications filed by O. D. T. following Selective Service's recent action authorizing it and other certifying agencies to exceed previous limits on certification requests.

Emphasizing the critical manpower situation, Director Johnson noted that 300,000 railroaders are now in the armed services, many of their jobs now being filled by women. "And," he added, "they tell me that on a railroad it takes three women to make a man." He also stressed the tight equipment situation, saying that O. D. T., as claimant agency for railroads, has thus far been allocated materials for 187,000 fewer freight cars than it requested. Thus the railroads now have 600,000 fewer freight cars, 22,000 fewer locomotives, and 15,000 fewer passenger cars than they had in World War I.

Knocking Out Domestic RRs—Seemingly to make the point that the armed services appear to have given enemy railroads a military status denied to this country's carriers, Colonel Johnson told of reading a newspaper account of how a member of our air force had knocked out one German locomotive. The airman's success in that connection was hailed as quite a feat, the O. D. T. director said—"on a day when 30 switch engines on one railroad in America were standing cold for want of crews." He added that "there's no more guns or anything else than can be transported."

Previously Colonel Johnson had told of the tremendous load being carried by the railroads. Even in the period of last winter's severe storms in the east, he said, there was a heavier volume for the European front in one month than in the entire first World War. The build-up to that peak month had got under way last October "when it was officially said that Germany would collapse." October was the biggest month up to that time and each succeeding month has shown an increase.

Miracles Almost Used Up—The O. D. T. director contrasted World War II's achievements of the railroads with the World War I period of government operation when the "worst mess ever" was the result—"as it always will be when the government tries to run the railroads." At the same time he warned that "even American transportation," has physical limitations, even though they were not reached, as predicted from time to time during the past two years. Such predictions have been wrong only because on each occasion "we've found additional capacity where no one suspected it existed."

In the latter connection, Colonel Johnson indicated his view that continuance of such fortunate discoveries cannot be expected or relied upon. America must come to realize that its pre-war acceptance of transportation as "not as free but as plentiful as the air" does not apply in war-time. The war-time load, the O. D. T. director went on, has been placed on transportation facilities which are "in all respects" the same facilities that served the country in time of peace.

He added that the railroads are now handling 1,000 more cars of export freight than a year ago, and they face the job of moving a billion bushels of grain of former crops with another billion bushels coming to harvest.

Tank Cars Keep Moving in Spite of Southwest Floods

Overland shipments of petroleum products into the eastern States held up well during the week ended April 14, despite the handicaps of floods in the Mississippi basin area and the heavy military demands on transportation, Deputy Petroleum Administrator Ralph K. Davies has reported.

Tank-car movements to the East coast during the week averaged 539,443 barrels a day, 1,145 barrels a day below the average for the preceding week, he explained. This high movement was made even though many shipments had to be diverted around flooded areas in Texas, Louisiana and Arkansas, with resultant operating delays in those areas, Mr. Davies said.

The April 8 to 14 tank-car movement was carried out with 17,537 cars, 40 fewer than were available for petroleum movements during the previous week. An unusually rapid movement of empties into the oil-producing areas and one of the best turn-around showings for tank cars in several months were credited with major roles in maintaining the high average.

Floods continued to hamper barge movements of petroleum products up the Mississippi and Ohio rivers, however. While no exact figures on these movements are currently available, it was reported they were approximately 60 per cent of normal.

Western Lines Get 2,300 Empties Daily

Grain loadings are running far above last year, says Colonel Johnson

Further recovery of eastern railroads from congested conditions resulting from winter storms and larger demands made upon them for box cars for western roads by the Car Service Division of the Association of American Railroads together have effected substantial increases in the westward movement of cars suitable for grain loading in the past two weeks, according to figures made available in connection with the Senate interstate commerce committee's investigation of the shortage of box cars in the grain producing states.

As noted in Railway Age last week, page 718, where the first two days of the committee hearings were reported, orders for the delivery of 1,990 box cars daily to the western roads were then in effect, beginning April 14. On April 20 the committee was informed that the eastern roads were releasing cars at the gateways at a rate of better than 2,300 daily. On that date 2,422 were turned over to the western lines, and 20,439 cars were delivered to them in the first 10 days after the 1,990 car daily quota was put into operation.

To curtail dissipation of the grain cars thus delivered to the western roads under the A. A. R. quota orders, the Interstate Commerce Commission on April 25 issued a service order, effective May 1, which provides that carload shipments of grain in box cars from the western grain producing states can be moved to points east of the Mississippi River and Lake Michigan only when authorized by a permit issued by a designated I. C. C. agent. The order was issued upon the recommendation of Col. J. Monroe Johnson, director of the Office of Defense Transportation, who advised the commission that "it is both desirable and necessary that some system of embargo, subject to permits, be established at once on shipments of grain to increase the supply of box cars for loading such grain." It appeared that the order would restrict the movement of loaded box cars from the western lines to the East, a movement which witnesses at the hearings described as so great that the western roads were deriving little or no net benefit from the diversion to them of empty cars from their eastern connections under the A. A. R. orders.

Elevators "Unblocked"—On the basis of grain loading figures from the western

roads Colonel Johnson—whose handling of the car supply to the western states was under criticism in the committee hearings, particularly by Senator Reed, Republican of Kansas—told the Senate committee on the 20th that loadings were then running at the rate of 12,781 cars a week more than at the same time last year. If that rate is maintained until July 1, he said, there will be 109,000 more carloads of grain moved this year, up to that date, than in the same 1944 period. In the first two weeks of April, 674 elevators were "unblocked," he observed.

The O. D. T. figures, "even if they are correct," Senator Reed commented, are "just a drop in the bucket." Calculations of Walter R. Scott, secretary and transportation commissioner of the Board of Trade of Kansas City, Mo., who was testifying at the time, indicated, the Senator said, that the grain states were 400,000 carloadings short of their requirements. And the harvest of the new winter wheat crop would begin in a few weeks, he pointed out.

Mr. Scott arrived at his estimate of a need for 400,000 more carloadings to clean up the backlog of grain to be moved by comparing the 1944 crop with that of 1943. Last year's production of most grains was much greater, he explained; the additional wheat produced would require 140,000 more cars, corn would require 23,000 more, and sorghums 43,000 more, than were loaded in 1943. In addition, grain products produced at the mills from these grains, especially wheat, would require an additional but undetermined number of cars. To offset these increases, smaller crops of oats and barley would require 9,000 fewer cars than in 1943. Thus he calculated that it would be necessary to move 200,000 more carloads of grain to handle the 1944 crop than were required for the 1943 crop. But the railroads, he said, have actually moved 200,-000 fewer cars than they had at this time a year ago, leaving a transportation deficit of 400,000 carloadings.

"It is difficult to understand how, in the face of the figures, there can be any complacency in Washington regarding our grain transportation situation," Mr. Scott remarked. Three agencies—the A. A. R., the O. D. T., and the I. C. C.—have been at work on the problem, he said, but the car shortage in the West persists.

Reed Says I. C. C. Failed—Mr. Scott's statement was repeatedly interrupted by questions and comment by Colonel Johnson, Senator Reed, and other senators. Senator Reed, acknowledging that "under pressure" the western roads were finally getting more than 2,300 cars a day from their eastern connections, insisted that the "Interstate Commerce Commission has completely failed," that "as much misinformation has been given to the country by Colonel Johnson and the A. A. R. as it is possible to imagine."

Senator McMahon, Democrat of Connecticut, remarked to this that he was not ready to believe that Colonel Johnson or Mr. Pelley (J. J. Pelley, president of the A. A. R.) had consciously misrepresented anything. "I want to see it demonstrated," he said, and Senator Reed assured

him that he intended to do so. Whereupon Senator Johnston, Democrat of South Carolina, inquired if the purpose of the hearing was not to get cars to the West, rather than to "try somebody."

Senator Reed did not concede this. The West, he contended, has been "outrageously mistreated" by the O. D. T. and the A. A. R., with the "passive concurrence" of the I. C. C.

Object of the Investigation—If the committee was sitting for two purposes—one, to try the I. C. C., A. A. R. and O. D. T., and two, to get more cars for the western roads—Senator McMahon wanted to know which came first. To this Senator Reed replied that the two were being disposed of concurrently. The fact is, he declared, that the West has been getting cars since the pressure has been put

When Interstate Commerce Commissioner Miller interposed the comment that Senator Reed had just stated that the commission was "complaisant" even though he had a letter from the senator to the effect that the commission was not complaisant but did not understand the situation, the senator replied: "I still say the I. C. C. does not yet understand the facts." Commissioner Miller again objected to being accused of complacency. "We are very serious," he declared.

"The result is the same," the senator remarked; that is, inability to get "anybody to do anything" to afford the West relief. He conceded, however, that the performance of the past few days had been yery satisfactory.

In a somewhat similar exchange of remarks on the preceding day, at an earlier point in Mr. Scott's statement, Senator Wherry, Republican of Nebraska, was an active participant, though not a member of the committee. Colonel Johnson and others

Wherry, Republican of Nebraska, was an active participant, though not a member of the committee. Colonel Johnson and others commented then on the failure of the War Production Board to allocate materials to build as many cars as the O. D. T. had

asked for, on the shipment of an undetermined number of cars to other countries, including some rebuilt cars sent to Mexico, and on the railroads' need for more manpower. But Senator Wherry declared that such "lateral passes" were not getting anywhere. "I want to know who is responsible," he insisted, and he wound up his remarks by saying that Nebraska will get cars.

Roads Relieved From Draft-Senator Shinstead, Republican of Minnesota, had remarked that it was then almost too late to take any action to meet the problem produced by the 1944 crop. The committee, the government agencies, and the railroads ought to anticipate the same situation pext year, he warned, and they ought to prepare for it in time. Colonel Johnson replied that the railroads were going to be very hard put for the next 15 months. One thing the "grain crisis" had accomplished. he added, was to persuade the W. P. B. and the War Manpower Commission to give the railroads some help. It had been effective, he explained, in getting relief from the draft for 40,000 essential railroad emplovees.

Committee Chairman Wheeler and other senators from northwestern states expressed keen interest in the reported transfer of rebuilt American box cars to Mexico, and they were not satisfied with explanations that these cars had been sold as junk, and that they were not suitable for interchange on American roads. The senators pointed out that the cars moved under load from Minnesota to the Mexican border, passing over several railroads. Senator Wheeler declared there was no excuse for selling cars to Mexico while crops were rotting in the fields in the West.

The construction of cars in this country for use abroad, either for Lend-Lease or other government agencies or foreign governments, also came under discussion, and Colonel Johnson was asked to get for the committee figures on the number of cars



Shifting Cars in the Tinsukia Yards, India

Lt. Col. H. B. Hoyt, former supervisor maintenance of way, Baltimore & Ohio, at Salamanca, N. Y., and now with the 705th Railway Grand Division in the China-Burma India sector, has discovered in the elephant an economical switching engine—and one with no upkeep. According to the colonel, who sent in the above photograph, the elephant lives on his own in a nearby jungle, and when needed in the yards, an elephant boy is dispatched to bring him in. It is said he is "capable of pushing five-to-eight-car trains into a siding."

involved. Senator Wheeler had heard that some were going to South America, where there was no war going on, and Senator Reed had heard that 18,500 cars had been sent abroad in 1944 on Lend-Lease orders. Colonel Johnson explained that he had a conference on April 19 with the car builders, at which they promised to give priority to orders from American railroads in using available materials, although they had large foreign orders on their books.

Open-top Cars Used-Mr. Scott, in reply to Colonel Johnson's assertion that grain loadings currently were running substantially ahead of 1944, expressed the view that much of the increase in grain loadings was the result, not of a better supply of box cars, but of the use of gondolas and lined stock cars for the movement of grain. Shippers were assuming the risk of weather damage to grain so shipped, he said, even though there was some doubt as to the legality of the carriers' requirement that they do so, because they could do nothing else to get the grain moved. When the use of open-top cars was begun, he asserted, the A. A. R. issued an order forbidding the use of gondolas for bulk grain loading. "That's the cooperation we get from the A. A. R.," he commented.

Several members of the committee pressed Colonel Johnson and A. A. R. officers present for definite figures on the loadings of military or other essential freight on eastern roads, particularly those that were accused of holding on their rails more than their ownership of box cars. Senator Capehart, Republican of Indiana, expressed the opinion that many of these cars were being used, not to carry war materials, but for "knicknacks" for sale in department stores. Without actual data, he declared, the committee was "shooting in the dark." The country is entitled to know what percentage of box cars is being used to haul civilian merchandise, and the facts can be obtained, he insisted. Colonel Johnson either has done a good job or a poor one, he contended, and it would be possible to decide that if the figures on loadings of essential freight were available.

Referring to this topic later, C. H. Buford, vice-president of the A. A. R., explained that the railroads could furnish information as to the number of cars moved on military billing, but there was no way to identify accurately what freight goes to the Army or other essential government agencies, since much of it is moved on commercial billing. Senator Wheeler already had repeatedly observed that the committee had had no complaints from eastern shippers about a shortage of cars, from which he concluded that they were getting enough cars to meet their requirements, while the western grain shippers were suffering a serious and prolonged shortage.

The testimony of spokesmen for the western grain states was completed on April 20, when Mr. Scott and J. W. Holloway appeared on behalf of Kansas and Missouri interests, particularly those associated with the Kansas City market. The hearing was recessed to April 30, when officers of the A. A. R., O. D. T. and other agencies were scheduled to present their points of view and supporting statistics to the committee.

Scott Traces Shortage to August-Mr Scott spent several hours in making a detailed statement to the committee in the interest, he explained, of the entire central western grain growing territory. The grain car shortage in that area, he said, began to develop noticeably about the middle of 1944. Before the first of August carloadings began to fall off, and the decline continued week by week until November, when conditions had become so serious that complaints to the A. A. R. led to its requiring the movement of empties from the East. Some improvement followed, he added, but it was terminated in December when the severe eastern storms began. Thereafter the shortage of cars became the most important news in the grain and milling trades, said the witness, and complaints were very numerous and of daily occurrence.

Receipts of wheat, corn and oats at 12 principal primary markets progressively declined from the week ended July 15, 1944, to the week ended March 17, according to Mr. Scott's figures, and he went on to say that there had been no "worth while" increase since. Since the beginning of the current marketing year, in June, 1944, his figures indicated, loadings of grain and grain products in the Western District were 206,817 cars less than in the preceding year, while on the eastern lines they were

only 11,541 cars less.

The elevator and flour milling industry is particularly concerned, Mr. Scott pointed out, over its inability, because of a shortage of cars, to meet even the Army's requirements. Their operations have been curtailed in many instances, he said, because grain receipts were insufficient to maintain their output. As long ago as March 1, he explained, the Army announced a program to ship 300 million bushels of wheat overseas before August 1. as well as an increased volume of flour, which would amount to 4,500 carloads of flour per month. The commercial mills at Kansas City already were 4,400 cars behind schedule on their contracts on March 1, he said, and the additional requirements resulting from the expanded Army program, in the face of the continued shortage of cars, had put them 7,728 cars behind March 15.

Army Prods Mills-"The Army becomes more and more insistent," Mr. Scott declared, "but the cars are not available. There are not enough cars for other business -all held to be essential-and the Army orders are superimposed upon the backlog of unfilled contracts. The answer, of course, is more cars, but Washington merely insists upon the impossible and fails to produce the cars."

The western states' representatives have asked "Washington authorities" to take four specific steps to bring some relief from the conditions he had outlined, Mr. Scott told the committee, but all of these suggestions were "rejected." They were (1) To increase the movement of empty cars westbound to a minimum of 2,500 per day; (2) to enforce this program through an I. C. C. order; (3) to require a specified proportion of these cars to be of western ownership (because they are, on the average, in better condition for shipping bulk grain; and (4) to require that at least 60 per cent of the cars returned be moved as far west as the Twin Cities or the Missouri

Army Transportation Assn. Is Growing Rapidly

The Army Transportation Association in the April issue of its official publication "The Army Transportation Journal" announces that its membership has alreadypassed the total of 10,000-originally set as the membership goal. So far, 23 local chapters have been established, as follows (the chapter names being enclosed in quotation marks):

1. "Charleston Port of Embarkation," Army Base, North Charleston, S. C.
2. "McFadden-Baltimore," 3rd Transportation Zone, 307 Tower Bldg., Baltimore 2, Maryland.
3. "Salt Lake City," Ninth Transportation Zone, 10 Exchange Place, Salt Lake City, Utah.
4. "Helderberg," Holding and Reconsignment Point, Voorheesville, N. Y.
5. "Lape," Los Angeles Port of Embarkation, Wilmington, Calif.
6. "Washington," Office Chief of Transportation, Pentagon Bldg., Washington 25, D. C.
7. "New Orleans," New Orleans Port of Embarkation, Poland and Dauphine Streets, New Orleans, La.

7. "New Orleans," New Orleans Port of Embarkation, Poland and Dauphine Streets, New Orleans, La.

8. "New York," Second Transportation Zone, 25 Broad Street, New York 4.

9. "Chicago," 6th Transportation Zone, 201 North Wells Street, Chicago.

10. "Searsport," Searsport, Me.

11. "New York Port of Embarkation," First Avenue and 58th Street, Brooklyn, N. Y.

12. "Auburn Holding and Reconsignment Point," Auburn, Wash.

13. "Pasco Holding and Reconsignment Point," Pasco, Wash.

14. "Lathrop," Lathrop, Calif.

15. "Ogden," Ogden, Utah.

16. "San Francisco Port of Embarkation," San Francisco, Calif.

17. "Seattle," District Transportation Office, 700 Central Bldg., Seattle 4, Wash.

18. "Yermo Holding and Reconsignment Point," Yermo, Calif.

19. "Golden Gate," District Transportation Office, 610 Market Street, San Francisco 6, Calif.

20. "St. Louis," District Transportation Office, 707 Market Street, St. Louis, Mo.

21. "Boston," Port of Embarkation, Boston, Mass.

22. "Atlanta," Zone Transportation Office, 619

21. Boston, Ass. V. Mass. 22. "Atlanta," Zone Transportation Office, 619 Peachtree Street, N.E., Atlanta, Ga. 23. "Myles Standish," Camp Myles Standish,

The Association is also enrolling members in large numbers among the personnel of Transportation Corps units overseas. The April issue of the "Army Transportation Journal" lists several hundred such memberships-some among them from four railway operating battalions and one shop battalion, and headquarters of the Second Military Railway Service. Among Transportation Corps units on active duty abroad, however, the bulk of the new members secured appear to have come from port units and quartermaster truck organizations, rather than from railway personnel.

Ickes Tells Railroads to Use More Low Grade Coal

The Solid Fuels Administration has warned industrial consumers and railroads that, unless they stop "excessive consumption" of scarce high grade Northern Appalachian coal and shift to other available coals, it may be necessary to restrict their shipments "in accordance with their essentiality."

To avoid having to invoke this drastic action, and to encourage purchases of lower grade coals, S. F. A. has issued an amendment (No. 2) to Regulation No. 27, removing restrictions on stockpiling of all grades of bituminous coal produced in the Northern Appalachian area.

Announcing the amendment, Solid Fuels Administrator Ickes said that railroads and industrial consumers have been concentrating their purchases on high grade coals to the neglect of others, thereby threatening to stop production of lower grade coal.

"We cannot afford to lose a single ton of usable coal which can be produced this year," he said. "It is essential that industrial consumers and railroads during the next few months buy as much as they can of the available lower grade Northern Appalachian output for current consumption. Removal of stockpiling restrictions will make it advantageous for the far-sighted user to burn the lower grades currently and store the higher grades for his own protection later in the year when little coal will be available for stockpiling.

"If these buyers continue to insist only on the best, total production in the area will suffer for lack of orders. Continued concentration of orders on the highest grade coals and failure to maintain production in all mines would necessarily force the restriction of shipments of the better grades to consumers who are considered most essential to the national economy."

Administrator Ickes said that shippers will be responsible for spreading their higher grade bituminous coals among industrial and railroad consumers so that all will have a fair opportunity to purchase them for stockpiling. At the same time, he urged consumers to make the fullest possible use of the lower grades because these can be used extensively without undue loss of efficiency.

Coal affected by removal of the stockpiling limitations is produced in mining districts Nos. 1, 2, 3, 4 and 6, in Pennsylvania, western Maryland, northern West Virginia and Ohio.

Stockpiling limitations on high volatile bituminous coal mined in districts Nos. 7 and 8-in Virginia, southern West Virginia, eastern Kentucky and northeastern Tennessee-formerly grouped with the Northern Appalachian coals, remain in effect. These limitations provide that industrial consumers and railroads can carry only a prescribed supply in stock.

I. C. C. Service Orders

The life of Interstate Commerce Commission Service Order No. 302, requiring railroads to reroute traffic routed over lines affected by floods in Oklahoma, Missouri and Kansas, has been extended to May 3 by Amendment No. 1 to the order, effective April 23.

On April 25 the commission issued Service Order No. 304, limiting the movement of carload shipments of certain grains from the western grain-growing states to points east of the Mississippi river and Lake Michigan. The order is effective from May 1 through July 31, unless otherwise ordered. It establishes three "permit areas," and designates I. C. C. permit agents for each of these areas to issue permits, good for not more than 15 days, authorizing carload grain movements to destinations "east of the west bank of Lake Michigan, east of the Chicago switching district and the Illinois-Indiana state line thence stations on and east of the Ohio-Mississippi rivers to New Orleans, La., except New Orleans for export."

Service Order 304 applies to wheat, corn, rye, oats, barley and flaxseed only. designates F. S. Keiser as general grain agent of the I. C. C. in charge of grain transportation, with offices at 209 South Wells St., Chicago, and puts the territorial permit agents under his direction. Southwest Permit Area includes all stations in Nebraska, Missouri, Kansas, Wyoming, Colorado, Oklahoma, New Mexico and Texas, also Council Bluffs, Iowa, and Sioux City and East St. Louis, Ill., and Granite City. The permit agent for this area is A. T. Sindel, with offices at Kansas City, Mo.

The Central Permit Area includes all stations in Iowa except Council Bluffs and Sioux City; all stations in Illinois except East St. Louis and Granite City; and all stations in Wisconsin except Superior and East End; it also includes the entire Chicago switching district. The permit agent for this area is J. H. Fisher, with offices at Chicago. The Northwest Permit Area includes all stations in Montana, North Dakota, South Dakota, and Minnesota, and also Superior, Wis., and East End. Permits are required for grain shipments from the Northwest area not only to the eastern territory described above, but also to destinations in Minnesota, Wisconsin, Iowa, Missouri and Illinois, and to Grand Forks, N. D., Omaha, Neb., South Omaha and Nebraska City, Kansas City, Kan., Atchison and Leavenworth, and the entire Chicago switching district. The permit agent for this area is E. J. Grimes, with offices at Minneapolis, Minn.; R. C. Woodworth was designated alternate agent for the area.

The order further provides that the number of permits issued shall be governed by the available car supply, and requires the permit agents to inform carriers of the location of grain ready for shipment under

permit. The railroads serving the permit areas are required to keep the permit agents informed daily as to the number of empty cars are available for grain loading. amen

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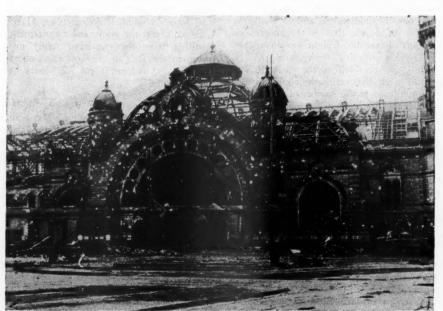
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Service Order No. 303, as amended, prohibits bunker icing or bunker reicing in transit of refrigerator cars loaded with cabbage originating in Florida, Georgia, North Carolina, South Carolina, Louisiana or Mississippi, when these cars have been top iced or retop iced. The order also prohibits any reicing of such cars in transit at points east of the Mississippi river. The order is effective from April 23 through July 31, unless otherwise ordered, and its application is subject to Bureau of Service permits.

Service Order No. 300, restricting the icing of refrigerator cars loaded with potatoes, has been superseded by Revised Service Order No. 300, effective from April 23 through June 30, unless otherwise ordered. This order continues the prohibition against initially icing or reicing Maine potatoes at any point east of the Mississippi river and north of the southern boundary of Tennessee and North Carolina. It also prohibits the initial icing or reicing in transit, at any point east of the Mississippi, of refrigerator cars loaded with potatoes originating in Alabama, Georgia, Florida, South Carolina, North Carolina, and Virginia (except the Eastern Shore). General Permits Nos. 1 and 2 under this order, however, authorize initial icing of potatoes originating in Alabama at stations not beyond Atlanta, Ga., Jackson, Tenn., Memphis or Nashville, plus one reicing in transit, and initial icing only of cars loaded with potatoes originating at certain Florida points.

Following removal by the War Food Administration of shipping restrictions on potatoes from certain western producing sections, the commission has issued Sixth Revised Service Order No. 259, which, as



U. S. Army from British Combine

Shell of the Haupt Bahnhof, Main Railway Station, at Cologne, Germanyportant Railroad Center, Prior to Its Recent Capture, Had Been the Target in Numerous Attacks Both by the R. A. F. and the U. S. Eighth Air Force

Railway Age-April 28, 1945

amended, is effective from April 19 through May 31, unless otherwise ordered. F. F. A. permits are still required for potato' shipments from Aroostook county, Maine, from specified counties in the lower peninsula of Michigan, and from southern Idaho and one county each in Oregon and California. Permits are no longer required for shipments from other Oregon and California counties specified in earlier versions of the order, nor from points in Colorado, Minnesota, or North Dakota.

Tie Association Executives to Meet at St. Louis May 8

Although the regular annual meeting of the Railway Tie Association has been cancelled in deference to the requests of the Office of Defense Transportation, the executive committee will meet at the Hotel Statler, St. Louis, Mo., on May 8, to transact regular business. In addition, the committee also will review the last year's work of the association by receiving the annual reports of the officers and considering the committee reports prior to their release and publication.

Railroads Facing Most Serious Labor and Traffic Problems

The railroads will face their most serious manpower and traffic problems in this second quarter of 1945, if the program for accelerated munitions production is carried through to completion as now planned, according to an article by Leonard P. Ayres, in the May issue of "Tracks," employee magazine of the Chesapeake & Ohio lines. This will be the case regardless of the end of the war with Germany. It will mean, he writes, that the railroads will be called upon to move more traffic, with fewer workers and less equipment, than in any previous quarter since America's participation in the war.

The reported schedules for expanded productions of munitions, according to General Ayres, would mean about a six per cent greater traffic load for the railroads than in the last quarter of 1944. These schedules contemplate a second-quarter increase of 9 per cent in the output of communications and electronic equipment; an increase of 14 per cent in miscellaneous motor vehicles and combat vehicles, such as tanks and armed cars; an increase of 16 per cent in airplanes, and nearly 40 per cent in ammunitions. There will be one important reduction. The scheduled output of new ships will be some 24 per cent less than that of the last three months of 1944.

"Munitions and materials with which to make them, together with other supplies and equipment for the armed forces, constitute about two-thirds of our present industrial production. Coal traffic increases as munitions output grows. So does the transportation of ores.

"If the changes that have been mentioned all take place, the ton-miles of freight traffic on all roads in this quarter will be more than they were in the third quarter of last year, which means that they will be the greatest in railroad history. They will amount to about 192 billion. Perhaps the railroads can carry that much freight, but the authorities in Washington have imposed some handicaps which will increase

the difficulty of the task. One of them is that there has been a large decrease in the amount of steel to be made available to the roads in this quarter for rails, track materials, and rolling equipment.

"Even more serious is the prospect that the new policies of the Selective Service may take into the armed services large additional numbers of railroad workers. Conservative estimates say that 50,000 more may be taken, and other estimates run as high as 150,000. The present writer believes that the actual number to be taken will prove to be much less than the lower of those two figures.

"The roads now have 80,000 fewer workers than the minimum number needed to handle present traffic volume properly. It is probably true that most of the young and physically sound railroad workers are now contributing to the war effort more effectively than they would be if they were sent to training camps."

Another Year of No Fatalities From Carrying Explosives

Although railroads are handling a greater amount of high explosives on account of the war than ever before, not a single railroad employee lost his life in 1944 as a result of accidents in connection with the transportation of explosives, according to the annual report of the Bureau for the Safe Transportation of Explosives and Other Dangerous Articles, Association of American Railroads.

Seven accidents due to the transportation of explosives took place in 1944. These resulted in only one person being injured and a total property loss of \$175,440. One accident took place in connection with the transportation of fire works, while six accidents resulted from the transportation of military explosives. In the past eleven years, there has been only one fatality resulting from accidents in connection with the transportation of explosives and that one took place in 1939.

In connection with the transportation of great quantities of dangerous articles, other than explosives, handled by the railroads in 1944, two persons were killed and 40 injured. Those two fatalities resulted from accidents in connection with the handling of gasoline. Accidents in connection with the movement of various dangerous articles other than explosives totaled 990 in 1944. Of this number, gasoline accounted for 178, electrical storage batteries, 170; crude oil, 138; sulphuric acid, 72; nitric acid, 46, and naphtha, 30. Property damage in connection with fires and explosions resulting from such accidents totaled \$568,283 compared with \$1,128,150 in 1943, when there were 966 accidents and six fatalities.

764th Shop Battalion Dispatches Locomotives from Paris

The 764th Railway Shop Battalion, operating from French shops in the Paris area. and giving priority service to all hospital trains between Paris and the front, now dispatches hundreds of steam and Diesel locomotives weekly to all points on the Continent. This represents more motive power than is being dispatched from any other point in the European Theater of Operations, Headquarters reveals. Among its service jobs, the 764th numbers the famed "Toot Sweet" Express and the "W. A. C. Blazer," first M. R. S. train to enter Germany.

Under the command of Lt. Col. Emil G. Ringberg, former Boston & Maine shop superintendent, steam locomotives are issuing from the Batignolles yards (largest of the Paris facilities), and Diesels from the Clichy section. The army railroaders at Batignolles have initiated their own system of repairs, and upon completion of a thorough inspection, supervised by M/Sgt. James A. Hiskey, of West Roxbury, Mass., formerly with the New Haven, a locomotive is given one of three classifications: (1) fit for immediate use; (2) light shop repair (all work under 72 hours); and (3) heavy shop repair (all work over 72 hours).

In the roundhouse at Batignolles, where Maj. Harry P. French, of Kansas City, Kan., former Santa Fe railroader, is in charge, a master chart lists each engine with classification and specific work to be done. Light shop repairs are done on side tracks, and heavy repairs are handled under the direction of 1st Lt. Lawrence R. Blizard, formerly with the New York Central.

At Clichy, S/Sgt. George N. McCausland, Diesel electrician from the Maine Central, supervises a 15-man crew of Diesel repair experts who, 24 hours a day, inspect, service and repair all Diesels coming into the Paris vard. Hospital cars are serviced under direction of Lt. Carl A. Magnusen, of Concord, N. H., former B. & M. railroader. They are given every possible service from rail repair to window-washing.

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since April 9, and which are of interest to rail-

Batteries In an effort to insure that the prevailing lead shortage is not reflected in the quality of replacement storage batteries produced in 1945, the industry has been instructed by W. P. B. that hereafter no producer may manufacture any replacement battery whose quality in respect to materials, including weight and dimentions of grids, is below the quality the producer maintained in similar batteries manufactured in the fourth quarter of 1944, W. P. B.

Limitation Order L-180 has been reports. amended, W. P. B. announces, to put these provisions into effect.

CMPR-4 Amended-Among a series of amendments to CMPR-4, which defines the operation ments to CMPR-4, which defines the operation of preference ratings under the controlled materials plan, one changes the carry-over provisions to prohibit the filling of a steel order more than 60 days after the end of the quarter for which the allotment was issued. No time limitation has been imposed hitherto where an order was accepted within the quarter for which the allotment was issued. The change is to discourage advance ordering under the provision.

In addition, the small free steel provisions af-

fecting stainless steel are reduced from 1,000 to 300 lb. and deliveries on Z-1E orders are re-stricted to steel in inventory more than 120 days. By the terms of other amendments the definition of "distributor" as used in the order definition of "distributor" as used in the order is broadened to include scrap dealers; the requirement for certification on Z-1E orders is more clearly stated, and a new paragraph is added to the order to clarify the extent to which warehouses may deliver material on toll agreements. Blanket permission to sell certain types of aluminum and copper materials on Z-1E orders is replaced by provisions requiring specific authorications before selle

thorizations before sale.

De-Watering Pumps—Direction 2 to Order L-192, which controlled the distribution of dewatering pumps in 12 northeastern and central flood area states, including: New Hampshire, Vermont, Massachusetts, Connecticut, New York, Pennsylvania, West Virginia, Ohio, Indiana, Illinois, Kentucky and Missouri, has been revoked since the threat of floods in these areas is now over.

Freon-The recent release of freon. amendment of Order M-28, was for the sole pur-pose of permitting the operation of existing installed refrigeration and air conditioning sys-tems, the W. P. B. said recently. Restrictions on production and distribution of air conditioning equipment have not been changed. This clarion production and distribution of air conditioning equipment have not been changed. This clarification was made because since the announcement of the release of freon, an erroneous impression had arisen in some quarters that new air conditioning equipment also had been released and could be obtained without restriction. This, W. P. B. emphasized, is entirely incorrect.

Freen-12—Restrictions on the delivery and use of Freon-12 (dichlorodifluoromethane) for air conditioning and certain types of refrigerating systems have been removed but precedence must be given to orders of more essential users, who are not on List A of Conservation Order M-28. Adequate supplies of F-12 gas should continue reasonable promptness. Failure to have empty cylinders returned to producers could result in the necessary for reimposing restrictions, W. P.

Lumber-Low grade lumber of certain species. and culls and rejects, which may be bought on uncertified and unrated orders, must now be charged against total amounts of lumber that consumers are authorized to receive. Direction 7 to L-335, formerly permitted consumers to receive such lumber in addition to the amount specifically authorized by W. P. B. This permission is withdrawn by an amendment to Di-

Species and grades covered by the direction are No. 4 or lower grades of Douglas fir, southern yellow pine, western hemlock and Sitka-spruce; E grades of Douglas fir and western hemlock; redwood dunnage; No. 3 or lower grades of cypress. This lumber still may be delivered by sawmills and received by distributors and delivered to consumers on ungertified and unrated orders if the sales does not interfere with the filling of certified orders. Culls and rejects of any species are also covered by Direction 7 and may still be sold on uncertified and unrated orders provided that the cost is not more than 85 per cent of the price established by the O. P. A. for the lowest standard grade of the same species. Species and grades covered by the direction are

Direction 2 a to L-335, as amended recently, makes clear that western pine lumber in inventory as well as that received after March 26, is subject to restrictions on its use for mill-work. As amended on March 26, Direction 2a prohibited the use of western pine for any mill-work except the following: windows; sash; doors; window, sash and door frames; window and door screens; trim and molding and cut stock for such

PR-25-W. P. B. called special attention to the fact that PR-25, as amended February 21, provides that no other ratings or allotment symbols may be used to get production materials for a spot authorization schedule than the ones assigned to it, unless a symbol rating is specificassigned to it, unless a symbol rating is specifically assigned by W. P. B. for a particular material or product to be used in the schedule. Furthermore, W. P. B officials said, this provision prohibits the use of the small order (SO) allotment symbol in obtaining materials for use on a spot authorization. Similarly, it was said, manufacturers of Class A products who receive orders identified by the Z-1 allotment symbol used in connection with spot authorizations may not treat them as small orders under the provisions of controlled materials plan regulation No. 1, unless their customers make allotments to cover such

Stainless Steel-Stainless steel has been redefined in a newly-amended M-126 order to bring it into conformity with the stainless steel de-finition in the steel order No. M-21-A, W. P. B. says. In the amended order, the term "stainless steel" means heat or corrosion resisting steel containing 4 per cent or more of chromium with or without nickel, molybdenum or other elements.

Sheet Steel-Production of hot rolled pickled steel sheets or strip during any month of the second quarter of 1945 on all orders from dissecond quarter of 1945 on all orders from dis-tributors accepted by producers must be limited to 50 per cent of the total pickled tonnage originally specified by a distributor on all his orders accepted for delivery in the month, the W. P. B. announced April 11. This action is designed to make it easier for producers of these materials to schedule production.

Used Materials—W. P. B. has emphasized that all of its orders and regulations apply to second-hand or used materials and products (other than scrap) to the same extent that they apply to new products, unless the order or regulation, or a published interpretation of it, expressly states otherwise. The rule is contained in interpretation No. 13 to PR-1.

Prices

Crossties—Purchasing commissions for part-time agents of railroad tie contractors have been restored under certain conditions by Amendment 2 to MPR16, effective April 16. Middlemen are expected to resume their work as intermediare expected to resume their work as intermediaries between local tie producers and tie contractors as a result of the partial lifting of O. P. A.'s ban on commissions. They contributed considerably to the supply of railroad ties, by buying small quantities and assembling them at railroad loading points, O. P. A. explained. Because of the small volume involved, these functions are too costly to be handled directly by a contractor.

Contractors must obtain approval of the O. P. Lumber Branch in Washington for payment commissions to part-time agents. Requests

A. Lumber Branch in Washington for payment of commissions to part-time agents. Requests must be accompanied by proof that the agents are not producers and will supply a service needed by the contractors or users by increasing the availability of ties in the area.

Seven-foot ties are given a specific price ceiling that is five cents per tie below that provided for comparable eight-foot ties. This will place these ceilings in proper relationship with prices for ties now in the regulation. The smaller sizes are bought principally by street-car lines and operators of railroads outside the United States. Provisions covering the pricing of odd size ties were reworded for clarification but no changes in ceilings were made.

changes in ceilings were made.

Iron and Steel Scrap—Brokers are authorized by Amendment 2 to MPR4, effective April 14, to charge their commission of 50 cents per gross ton on iron and steel scrap sold at the same price at which it was purchased, even though this price may be below the ceiling. Since last November 16, brokers have been permitted to charge their commission on sales only if the scrap was purchased and sold at the maximum prices

provided by the regulation.
Other changes, include:

1. The number of grades and specifications of railroad scrap are revised in line with changes in railroad specifications made by the Association of American Railroads.

2. Provisions governing dealer sales of rail-road scrap are amended to permit dealers or contractors who demolish railroad equipment upon the property of a railroad to sell the heavy melting steel thus obtained at the ceiling prices established for No. 1 railroad heavy melting steel. This gives sellers of such scrap an increase of \$1 per gross ton over the dealer and industrial ceiling price that previously governed such sales.

ceiling price that previously governed such sales.

3. Preparation-in-transit provisions of the price regulation are broadened to permit in-transit preparation of cast iron in Zone C on all sales. Previously in-transit-preparation charges could be made only on cast iron sold under allocation by the W. P. B.

Journal Bearings-Dollar-and-cent ceiling prices Journal Bearings—Dollar-and-cent ceiling prices have been established for broached railway car journal bearings, sizes 6 in. by 11 in. and under, with ¼-in. lining, made in accordance with A. A. R. Specification E-M-511-43, by Amendment 8 to RMPR-125, effective May 1.

For straight sales involving no exchange of

metal, the new ceilings are 18.65 cents per lb. f. o. b. producer's plant in quantities of 7,500 lb. or more, and 18.65 cents per lb. plus the seller's customary quantity differential for quantities of less than 7,500 lb.

For sales in which the producer receives scrap metal from the buyer under a conversion or toll agreement, the new ceilings are 18.40 cents per lb., f. o. b. producer's plant, including a maximum conversion or toll charge of 5.91 cents per lb. where the old bearing is returned with lining, and 18.90 cents per lb. including a maximum conversion or toll charge of 8.03 cents per lb. where the old bearing is returned without lining.

Paints-Manufacturers need not reduce their existing ceiling prices for house paints and other ready-mixed exterior linseed oil paints because of lower costs for pigment ingredients in those cases where changes in paint formulas are caused by W. P. B. conservation orders and the service-ability of the paint is maintained. Heretofore, any reduction in the cost of pigment ingredients required a corresponding reduction in the March, 1942, "freeze" ceiling prices for these paints. Under a recent conservation order, manufac-

turers are restricted in their use of white lead pigment normally used in making paints, necessitating a wider use of other types of pigment, which may be of lower cost, O. P. A. explained.

Red Cedar Piles-Specific dollar-and-cent maximum prices for western red cedar piling, on a lineal foot basis, have been established by Amend-

ment 1 to MPR-554, effective April 19.

Shipping weights to be used in calculating transportation charges are established at 38 lb. per cubic foot, which is approximately the figure used for partially seasoned red cedar, the condition in which most western red cedar piling is

Steel Castings—Among the changes in provisions governing the pricing of steel castings provided by Amendment 15 to RPS 41, effective April 14, a clarification is made in provisions for transportation charges or allowances on steel castings and railroad specialties sold on a delivered basis. At present, if rail charges on such sales exceed 50 cents per 100 lb., the producer is not required to absorb more than 50 cents per 100 lb. In some parts of the trade, however, this had been interpreted to mean the producer had to absorb the rail charges up to 50 cents per 100 lb., regardless of the type of transportation used or amount of transportation charges. The pricing provisions of the regulation governing steel castings sales are now changed to state clearly that on delivered sales, where the transportation is less than 50 cents per 100 lb., the producer shall not be required to April 14, a clarification is made in provisions for 100 lb., the producer shall not be required absorb more than costs actually paid.

Waste Paper-All shipments of commercially packed waste paper must now be accompanied by a manifest, giving particulars o fthe ship-ment, and more complete invoices also must be supplied according to Amendment 11 to MPR-30, effective April 21.

The manifest must state: 1. date of shipment; 2. town or city of origin; 2. name of each grade; 4. total weight of each grade; 5. if baled, the number of bales of each grade; 6. weight of each bale; 7. license truck number of any truck and in the proportion of the properties the properties of the properties of the properties the properties of the prope

each bale; 7. license truck number of any truck used in transporting the waste paper; and 8. the railroad car number and initials if the waste paper is transported by a railroad car. This manifest must be posted in the railroad car or other vehicle carrying the waste paper. Responsibility for preparing the manifest is on the first seller regardless of the buyer.

The invoice for commercially-packed waste paper must state: 1. loading date; 2. seller; 3. buyer; 4. consignee, if any; 5. name of each grade; 6. total weight of each grade; 7. number of bales of each grade; 8. weight of each bale; 9. loading charge, if any; 10. price being charged per ton for each grade; 11. broker's allowance, if any; 12. origin by street and city; 13. license or truck number of any truck used in transporting the wastepaper; and 14. railroad car number and initials if the waste paper is transported by a railroad car.

All sellers are required to keep a copy of every

transported by a railroad car.

All sellers are required to keep a copy of every invoice and manifest prepared by them, and every buyer is required to keep every invoice and manifest received by him. For record-keeping purposes, a broker is required to attach to his copy of his invoice all invoices received by him for a particular shipment of waste paper except for any quantity that may be shipped out of his own warehouse, or he must otherwise identify on his records the sources of supply for all paper in each shipment he makes. all paper in each shipment he makes.

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GENERAL NEWS

Plans to Alleviate Congestion of L.C.L.

A modified "sailing day" plan in successful use on the New Haven

Another general embargo on l.c.l. freight is not an immediate necessity, according to views expressed at the recent New York meeting called by the Car Service Division to discuss, with transportation and station officers of eastern roads, plans for handling the abnormal accumulation of loaded merchandise cars at freight houses and transfers. A report of the discussions has been sent to railroad transportation officers by C. S. D. Chairman Warren Ç. Kendall.

Various relief proposals came up for consideration, including the New York, New Haven & Hartford's so-called "Hartford Plan," which is an adaptation of the old "sailing day" plan, differing from the latter principally in that it is based on cooperative arrangements between the railroad and shipper groups. The consensus of the meeting was that the "Hartford Plan," under which directly loaded merchandise cars move to their destinations, by-passing transfers, should be susceptible of wider application in view of the success reported by the New Haven. It was suggested that the idea should be promoted through 1.c.l. committees of Shippers' Advisory Board groups, or through local committees of transportation representatives appointed by local business organizations, working with the railroads.

Embargo Opposed-Lack of sentiment for another general embargo was based on predictions that any good effects would be nullified by the surge of offerings at the time of its expiration. It was conceded that the recent ban on l.c.l. and forwarder freight afforded some measure of relief at stations, but it had less effect at transfers. Moreover there was a feeling that a new general embargo "would add to the ill-will now created by poor l.c.l. service," the C. S. D. report said. The consensus with respect to local embargoes was that they are difficult of application except at noncompetitive points. However the local-embargo matter is being studied further by a committee which will first look into the Cleveland situation.

Other suggestions discussed at the meeting included proposals to seek relaxation of Office of Defense Transportation loading restrictions with respect to westbound movements only; to discourage the solicitation of l.c.l. traffic for movement over circuitous routes; to disregard shipper routings on l.c.l.; and to assign traffic depart-

ment employees to clerical work at stations and transfers. Also it was suggested that further consideration might be given to use of Mexican labor at transfers.

Labor from Many Sources—Reports made at the meeting indicated that the Pennsylvania is now using as station labor Mexicans, women, soldiers, school boys, borrowed maintenance of way men, and borrowed shopmen. There were other reports on the so-called "farming out" practice whereby cars from larger stations are shifted to smaller stations where regular railway labor is available or where school boys are more likely available. Attention was also given to the trap-car situation, it being the consensus of the meeting that "there is a considerable opportunity to save box cars as a result of close scrutiny" of trap-car practices.

Many complaints were voiced at the meeting "concerning the continuing failure of a large number of consignees to receive freight on Saturdays." It was decided that this matter should be pursued with appeals to offending industries through various sources, including not only the direct efforts of the railroads themselves, but committees of the Shippers' Boards, Director J. Monroe Johnson of O. D. T., and any other available approach.

Representation of Employees

Yardmasters of the Clinchfield have chosen the Brotherhood of Railroad Trainmen as their Railway Labor Act representative, according to results of a recent election which has been certified by the National Mediation Board. They were formerly represented by Yardmaster R. H. Nichols.

In other recent elections on the Clinchfield, the B. of R. T. defeated the challenging Switchmen's Union of North America, thus retaining its right to represent yardmen (foremen and helpers) and the Order of Railway Conductors defeated the challenging B. of R. T., thus retaining its right to represent road conductors. The St. Louis-San Francisco's technical engineers, architects, draftsmen, and "allied workers below the rank of officials" have chosen the International Federation of Technical Engineers, Architects and Draftsmen's Unions, American Federation of Labor. These employees were previously unrepresented.

In two other recent cases, the board was unable to make certifications for the reason that less than a majority of those eligible to participate in the elections had actually voted. The employees involved were the Union Pacific's patrolmen (special agents, yard watchmen, train riders, and guards); and the subordinate officials in the Northwestern Pacific's maintenance of way and structures department.

Floods Continue to Delay S. W. Traffic

Heavy rains last week repeat troubles of early month in wide area

Serious floods caused by unusually heavy rains throughout East Texas, Arkansas and Oklahoma interrupted railway service over a wide area during the week of April 1. Two weeks later prolonged rain storms throughout Oklahoma, eastern Kansas, Iowa and Missouri resulted in similar conditions in those states.

At Greenville, Tex., nine inches of rain fell on March 30, with lesser amounts throughout the remainder of East Texas, Oklahoma and Arkansas, bringing record floods to the Sabine and Sulphur rivers in Texas, and near record floods to the Ouachita, Red, Arkansas and White rivers in Arkansas and in adjoining states. The rapidly rising waters of the Sabine, on March 31, cut the main line of the Texas & Pacific between Marshall, Tex., and the west at Big Sandy, Grand Saline and Mineola, Tex., and also cut the main line of the St. Louis-Southwestern between Mt. Pleasant and Tyler. Tex., at Big Sandy.

Pleasant and Tyler, Tex., at Big Sandy. As the rains moved eastward through Texas, rising waters of the Sulphur river, on April 1, stopped T. & P. operations between Texarkana and Marshall at Sulphur, Tex., and cut the Cotton Belt's main line from Texarkana to the west at Bassetts, Tex. On that same day the flooding Sabine blocked the Missouri Pacific's main line at Footes, Tex., just south of its junction with the T. & P. at Longview, Tex.

The widespread floods simultaneously broke all of the main railroad routes in East Texas leaving only one secondary main line open from Texarkana to Ft. Worth, the T. & P.'s Bonham subdivision, and closing all routes from Texarkana to South Texas. Because of these conditions the "Texan" and the "Sunshine Special" passenger trains of the Missouri Pacific-T. & P. were consolidated at their originating terminals, St. Louis, Mo., and Memphis, Tenn., and operated over long detour routes. The Houston sections were diverted to operate via Missouri Pacific to Kinder, La., thence Gulf Coast Lines, while the West Texas section was operated via the Bonham subdivision of the T. & P. from Texarkana direct to Ft. Worth. San Antonio passengers were diverted to the Texas Special of the Frisco-Katy. Cotton Belt passenger trains were terminated at Texarkana, stub service being operated between Waco, Tex., and Tyler, and between Dallas, Tex., and Mt. Pleasant.

(Continued on page 773)

Where Can Railroads Get Needed Capital?

They will have to take handouts too unless those to rivals are curtailed

The kind of competition we had in transportation in the past—an equitable variety where rewards went automatically to those who produced improvements in service and economy—did not injure the railroads; they thrived and grew great upon it. But what about the kind of transportation competition today, which provides low transportation expense by some non-railroad agencies by transferring part of their costs from direct beneficiaries to general taxation. Can the railroads thrive and go forward under such competition?

Such, in substance, was the question raised by Gustav Metzman, president of the New York Central, in an address to the "Fifty Club" at Cleveland, Ohio, on April 23.

"Will your railroads continue to meet your transportation needs progressively? They certainly will if they are not constantly slowed by caution signals of uneconomic competition," he said.

"Railroad men do not fear the outcome if the winner of the competitive struggle is to be the one who serves his customers best. No man may lay claim to a place in the nation's business unless he can provide, in fair competition, something his customers want and are willing to pay for. But every American is entitled to equality of opportunity—to conditions that enable him to compete on terms no less favorable than the terms the other fellow enjoys.

"The broad problem the railroads face goes to the heart of our American enterprise system. This concerns the terms on which capital funds will be provided, out of the public treasury, for facilities used by highway, water and air carriers. Will it be done on a basis consistent with the private enterprise system? Or will private capital in railroads be pitted in unequal competition against the public treasury?

"The railroads own, maintain and pay taxes on their rights of way, track and other fixed properties. Of the total investment in American railroads of \$25 billions, 400 millions, only one-fourth, \$6 billions, 600 millions, is invested in equipment. The other \$18 billions, 800 millions is the capital cost to the railroads of providing their own roadway. To own and maintain this roadway each year costs an average of \$1 billion, 325 millions. In 1940, 30 per cent of the gross revenues of the railroads was used to pay this roadway expense. And it is estimated that the taxes on the roadway alone were \$340 millions, or 8 per cent of total railroad revenues.

"On the other hand, the treasuries of our federal, state and municipal governments have almost wholly provided the roadways and fixed facilities used by the railroads' competitors. It is estimated that in the last twenty years or so, more money was spent on fixed transportation plant other than railroads than had been spent on the whole railroad plant in the United

States in more than a century. By far the greater part of the money spent on these other avenues of transportation came from the government—but over 98 per cent of the investments in railroads was the *private* funds of *private* investors.

"The users of these public facilities either pay no tolls, or they pay inadequate user taxes and tolls. To me, this does not make sense. And it does not make sense from a public standpoint. The shipper who uses subsidized transportation pays only part of the cost, the remainder being paid out of the public treasury. The shipper who uses the railroad pays the whole cost and through taxes pays some of the costs of the user of subsidized transportation. When such discrimination exists, it becomes possible for a less efficient transportation agency, using public facilities, to prevail against a more efficient competitor. The less efficient may prevail because it collects from the user only part of the true cost of providing the service.

"There is a way that private investment in railways can live alongside of government investment in highways, waterways, airports and airways. That is, to make our government-owned transport plant self-supporting. People who use it would pay their way, through fair user charges and tolls. Then, increased use would automatically increase the financial returns and make it possible to finance necessary extensions and improvements. The need for facilities and the ability of the business to support them, rather than politics, would be the test.

"Unless the railroads are given equality of competition with their competitors, I do not know how long the railroads can get along without public aid and still provide the service the nation needs in peace, and maintain a plant immediately available in case of war. The alternative is able in case of war. public grants for railway improvements, tax exemptions on railway property or other similar measures. I most emphatically do not advocate subsidies in behalf of the railroad industry from any source. much simpler-and much sounder from the standpoint of our free enterprise system-to put public investments in all transportation on a self-supporting basis.

"As you look at your railroads, there is a short view and a long view. The short view is that a dollar saved today in transportation charges, even though it be saved at public expense, is a dollar gained. The long view is that American industry has an interest in sound transportation, and an interest in the preservation of our system of private enterprise, far greater than any temporary gain in shifting transportation costs from user to taxpayer."

More Steel for Barges

The Office of Defense Transportation has announced that the War Production Board has allocated 5,500 tons of carbon steel for waterways transportation purposes in addition to 14,077 tons previously assigned for the second quarter of 1945. The steel is to be used in building barges and towboats for private carrier use on inland waterways. The new allotment was made on the condition that the orders be placed with mills equipped to make carbon steel plates.

Cunningham Assays Air Cargo Threat

Contends it will not greatly curtail R. R. earnings, cites cost figures

Professor W. J. Cunningham of the Harvard Graduate School of Business Administration, in the Spring issue of the Harvard Business School Alumni Bulletin, takes issue with those who predict that "tomorrow's skies are to be filled with flying box cars" while "tomorrow's railroad is to be two streaks of rust in a bed of weeds." In support of his opinion, he cites statements by leaders in the aviation industry itself-among them President W. A. Patterson of United Air Lines (see Railway Age of December 5, 1942, page 920) and the business research department of the Curtiss-Wright Corporation, which latter organization predicts air freight costs, including ground handling, at 17 to 20 cents per ton-mile in the fourth and fifth prewar years.

He calls attention, further, to the air freight tariff and classification recently issued by American Airlines, under which, based on air distance, the ton-mile rate on "Class A" freight between New York and Chicago is 56.63 cents—as compared to the first class air express rate of 67.68 cents, the first class railway express rate of 11.55 cents, and the first class railroad rate of 4.61 cents. Commodity rates are provided in this airline tariff under which oranges in quantity may move from Los Angeles to New York at \$32.20 per 100 lb. compared to a railroad charge of \$1.63, including re-frigeration. While "the competition of the plane in passenger service" is a "real threat" to the railroads, Professor Cunningham believes that in freight service the railroads "are not likely to be seriously affected from air cargo.'

Writing in the same issue of the "Bulletin," Assistant Professor Shallenberger says that he agrees with Professor Cunningham on the outlook "as far as the next fifteen years are concerned" but "beyond that time I feel that no one can safely predict." He sees the railroads in the first five post-war years as losing to air carriers "some perishable freight, a considerable part of the first and second class express, the long-distance first class mail and perhaps much of the parcel post traffic." He considers present rates for air traffic to be only "a jumping-off point for post-war rate reductions."

There are many "variables" in the situation, among them what the government policy may be on rate regulation, and on what airline policy may be in the allocation of joint costs. He believes that an average airline cargo rate of 25 cents per ton-mile may be achieved within five years after the end of the war, with some individual rates as low as 15 cents per ton-mile; and points out that "one responsible study has indicated that lettuce shipped by air from California at a rate of 7 cents per gross ton-mile could be effectively sold in competition with lettuce shipped by freight."

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Two Employees Get Medals of Honor

C. & O. engineer and Burlington switchman cited for saving life on the railroads

Upon recommendation of the Committee on Award of Medals of Honor, approved by the Interstate Commerce Commission, the late President Roosevelt on February 28 and March 16 bestowed such medals on James P. Tracy of Ottumwa, Iowa, a Chicago, Burlington & Quincy switchman, and Benjamin B. Clement of Richmond, Va., a Chesapeake & Ohio engineer. These medals were awarded under the act of February 23, 1905, which provides for bronze medals of honor in recognition of outstanding feats of bravery connected with saving of life upon the railroads.

The award to Mr. Tracy was based on his rescue of a 13-year-old school girl from a Burlington track on which a passenger train was approaching. This occurred September 21, 1944, at Ottumwa.

Rescuer Almost Hit—About 8:35 a.m. on the date specified, Mr. Tracy was at Iowa Avenue, which crosses at right angles two main and seven yard tracks of the railroad, according to the notice by W. P. Bartel, secretary of the commission. An eastbound freight was passing over the highway crossing, the gates on either side being lowered. While the gates were down, several pedestrians "ducked under" them in order to cross the tracks immediately after the rear of the freight had passed. Meanwhile, a westbound passenger train was approaching on the parallel track, but its approach was hidden from the waiting pedestrians by the freight.

As soon as the freight had cleared the crossing, the pedestrians began to cross the track ahead of the approaching passenger train. One of the last to start across was the school girl involved. She started to run across the track, hesitated, then fell face forward on the track in front of the approaching train, which was moving about-35 m.p.h. With the engine only 80 or 90 ft. distant, the girl seemed unable to rise from the track. Mr. Tracy, who was standing on the opposite side of the track from which the girl approached, and some little distance to the east, "ran to the point where she lay, crossed the track ahead of the engine and succeeded in pulling her clear of the track just as the passing locomotive brushed his clothing."

The award to Mr. Clement was based on his action in returning to the blazing cab of his engine and bringing his train to a stop after being blown to the cab floor by exploding and burning gasoline sprayed over the locomotive in a collision with an automobile at a grade crossing near Newport News, Va., on October 26, 1944. If Mr. Clement had not brought the heavily loaded passenger train to a stop, the notice by Secretary Bartel pointed out, it would without doubt have continued on a down grade some 4 miles, and then either would have overturned on an 8 deg. curve or con-

tinued about ½ mile further to run off the end of a pier into the James river.

Burned, But Saved His Train-About 3:35 p.m. on the date specified, the C. & O.'s eastbound train No. 46, the "Sportsman," was approaching Todd's crossing at about 75 m.p.h. Mr. Clement was the engineer on this train. Also approaching the crossing from the opposite direction on the parallel track was westbound passenger train No. 41, the "George Washington." After No. 41 had cleared the crossing two automobiles which were on the north side of the tracks started to cross, their drivers apparently being unaware of the approach of the eastbound train. The leading automobile escaped, but the second was hit by the engine and demolished, gasoline being sprayed over and within the cab.

The gasoline ignited and exploded, throwing the engineer from his seat to the cab deck. When he recovered from the first shock, the locomotive was still running at full speed with a wide open throttle. The interior of the cab was filled with flame. Although his clothes were on fire and his body was badly burned, Mr. Clement rose from the engine deck, entered the blazing cab, and made an emergency application of the brakes which brought the train to a stop some 4,800 ft. east of the crossing.

After stopping the train, the engineer was helped from the locomotive and taken to a hospital. His clothes were partially burned from his body. He suffered serious burns on his leg; his entire scalp was burned except where it was protected by a leather hat band; his hands, face, ears and eyes were badly burned; and he lost his sight for a period of about a week.

Mr. Tracy's was the fifty-fourth, and Mr. Clement's the fifty-fifth, medal of this character awarded since the passage of the act in 1905.

Roadmasters' Association to Hold 1-Day Annual Meeting

The Roadmasters' and Maintenance of Way Association has given up previous plans for a regular three-day annual meeting in September, and in its place will hold a one-day annual meeting, at the Stevens Hotel, Chicago, on September 12. designated an annual meeting to permit the transaction of essential association business and the election of officers, this meeting will be restricted in character, open alone to officers and directors, the chairmen and vice-chairmen of technical committees, and to other members who can attend without interfering with their work and without train travel. The most important function of the restricted meeting will be to receive and pass upon the five technical committee reports to come before the association, looking to the distribution of these reports to members at the earliest possible

Rule on Land-Grant Bill

The House Committee on rules last week granted a rule providing for expedited consideration of H.R. 694, the pending bill sponsored by Representative Boren, Democrat of Oklahoma, to repeal remaining provisions of the land-grant-rate law.

Security Cost Figures Defended by Latimer

Answers attacks on his previous testimony in support of R. L. E. A. program

Appearing at the April 19 and 20 sessions of House interstate and foreign commerce committee hearings on H.R. 1362, the Crosser bill embodying the Railway Labor Executives' Association program for liberalizing the Railroad Retirement and Railroad Unemployment Insurance acts, Chairman Murray W. Latimer of the Railroad Retirement Board made his answer to attacks on his previous testimony in support of the bill. This Latimer presentation was part of R. L. E. A.'s rebuttal which had opened with a statement from D. B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen, as reported in the Railway Age of April 21, page 723.

R. L. E. A. also offered the testimony of Ralph L. Booth, of the actuarial department of the Travelers Insurance Company, who appraised the cost studies made with reference to the bill as having been "carried through carefully, with due regard to conservatism and actuarial treatment based on reasonably sound experience tables and statistics." Mr. Booth went on to express his opinion "that on the basis of past experience projected into the future, the overall cost estimate of 12½ per cent of payroll for retirement and survivorship benefits in effect and proposed is the best estimate which can be made."

Latimer Optimistic on R. R. Traffic-Under the bill, another 5 per cent of payroll would be added to the retirement tax, which would thus become 111/2 per cent of payroll and rise to 12½ per cent after December 31, 1951. These taxes are paid half by the carriers and half by the employees, while the carriers pay in addition the entire unemployment insurance levy of 3 per cent of payroll. Mr. Latimer estimates that 11/2 per cent of the additional 5 per cent tax proposed in the bill will be sufficient to take care of the retirement system's present deficiency. Mainly because he assumed higher future railroad payrolls, this Latimer estimate differs from the latest report of the Retirement Board's actuarial advisory committee which found that an additional levy of between three and four per cent of payroll would be required to support existing benefits.

In his rebuttal statement Mr. Latimer first addressed himself to opposition testimony which he interpreted as an undertaking to make the committee believe "that my estimate of 1.5 per cent tax deficiency is my own personal estimate cooked up in a corner somewhere and produced by some secret formula known only to me." As a matter of fact, he insisted, the 1.5 per cent estimate "is not my estimate alone, but it is the estimate of the Railroad Retirement Board made officially to this committee on March 10, 1945, and from that report there were no dissents."

The March 10 report on which Mr.

Latimer's colleagues went along with him was an adverse recommendation on two of the many pending bills to liberalize the Retirement Act in various specific respects. Mr. Latimer also listed various other such bills on which like reports have been made during the past several years. He conceded that he, personally, wrote most of these reports, "just as I have written the testimony which I have given before this committee on H.R. 1362"; but he added that his colleagues "have joined me in the reports in your files, without exception—they have joined me in the estimates of cost which were made in those reports."

Management "Tears" Amaze Him-Such estimates, Mr. Latimer continued, "were constructed by substantially the same methods as the estimates of cost which I have made on H.R. 1362." point the R. R. B. chairman wanted to make in this connection was: "When I have made cost estimates in connection with bills on which an unfavorable report was submitted, nobody has quarreled with these estimates." He also stated that he had been unsupported, until R. L. E. A. sponsored H.R. 1362, in his efforts to get an increase in taxes to support the retirement system. He explained that his colleagues on the board refused to join him in a tax-increase recommendation to Congress, while the railroad industry has recommended no tax increase. Mr. Latimer has thus been "somewhat surprised" at the "gallonage of tears" the management representatives have shed at the hearings over his "failure to recommend a greater increase."

The R. R. B. chairman next undertook to answer observations made with respect to the frequent changes in his cost estimates. Of the making of actuarial estimates, he said, "there is no end"; and it is his view that there "cannot be too many estimates if they are honestly done and reported exactly as they come out."

Says Investors Don't Know Their Business-Coming to the defense of his assumption that the average payroll of the railroad industry over a considerable period of time in the future will be as high as \$3.5 billion annually, Mr. Latimer stated that, in the two years since that estimate was originally made, he has become "more optimistic about the possibility of securing full employment." He believes that his views in the connection reflect the views of "most persons in the field of economics today," and "certainly the views of the great majority of economists in the service of the federal government." However, Mr. Latimer went on, "they also, quite certainly, do not reflect the views of those economists who practice their profession in the area south of Canal street on the island of Manhattan."

Calling attention to the "high degree of relationship" which he observes between railway traffic, earnings, and payrolls, and the general level of business activity, Mr. Latimer calculated that a \$120 billion national income would bring annual railroad payrolls "averaging \$3.5 billion." And he found that Dr. Julius H. Parmelee, director of the Bureau of Railway Economics, had used a national income figure of \$120

"as his starting point for his post-war estimates" in material submitted at last fall's Interstate Commerce Commission hearings in the Ex Parte 148 rate proceeding. Mr. Latimer conceded that Dr. Parmelee did not make a "flat prediction" of a \$120 billion national income; but the R. R. B. chairman was "sure" that the B. R. E. director "did not think of himself as having adopted a figure which was anything other than reasonable."

Mr. Latimer next proceeded to mention various other current estimates of post-war annual income, all "materially above Dr. Parmelee's assumption of \$120 billion." He assumed that the writers and institutions whose figures he summarized "are not indulging in fantasy, and that even in the absence of a specific prediction they believe they are discussing matters which are not mere possibilities." All of which brought Mr. Latimer to another series of citations in answer to expressed fears that the railroads will lose a large volume of business to their competitors in the post-war period. The Latimer estimates of future railroad payrolls is based on the assumption that the railroads will secure a share of the total transportation business comparable to that of the pre-war years—he did not rely on their retaining "the relative gains of the war years."

Cites Favorable Predictions-In holding optimistic views with respect to the future of the railroad industry, Mr. Latimer finds himself in "good company." His citations included references to Railway Age reports of recent addresses delivered by railroad executives; to the booklet entitled "The Post-War Railway Market for Manufacturers," by the editors of Railway Age; to Brigadier General Leonard P. Ayers' article on the "Postwar Outlook for the Railroads," which appeared in the January, 1944, issue of "Tracks"; and to editorials and articles in financial publications. [The Railway Age booklet cited by Mr. Latimer stated that "it would be unrealistic to discount the ultimate effect on railroad earnings which indefinite proliferation of rival transportation facilities provided out of the taxpayers' pockets, in response to political rather than economic demand, may have." The Railway Age prediction of a favorable level of railroad traffic and earnings was for the short term and not for the indefinite future.]

Turning to the opposition presentation made by John T. Corbett, assistant grand chief engineer and national legislative representative of the Brotherhood of Locomotive Engineers, Mr. Latimer found "nine basic errors in the type of calculation used." Six of Mr. Corbett's "errors" are "in the direction of overstatement of costs, and in three there was an understatement of costs,' the R. R. B. chairman went on. He proceeded to support these statements with a lengthy discussion and a series of tables, after which he came to the defense of his estimate of the cost of the new survivor benefits which the bill would add to the retirement system.

This survivor-benefit plan would be the most costly of the proposed amendments to the Retirement Act, the Latimer estimate being that it would absorb the proceeds of about three per cent of the addi-

tional five per cent payroll tax which the bill proposes. Mr. Latimer explained in detail his method of arriving at the survivor-benefit cost, continuing to do likewise with respect to his estimates on the cost of the other proposed changes in the retirement act, such as the new disability provisions, the crediting of compensation up to an average of \$300 a month, the new prior service provisions, and the proposed extension of coverage to include forwarders and railroad-owned trucking companies.

Benefits at Employers' Expense-He made a similar presentation in support of his estimates as to the cost of the proposed Unemployment Insurance Act amendments, which include provisions for adding sickness and maternity benefits as well as liberalizing existing unemployment benefits. No tax increase is proposed for the Unemployment Insurance Act amendments, the present levy (paid entirely by the railroads, as noted above) having already produced a fabulous reserve of more than a half billion dollars. Meanwhile, Mr. Latimer opposed any reduction in the unemployment tax, or the adoption of a "merit rating" system whereby taxes are put on a sliding-scale basis, being reduced in times of low benefit payments and large reserve funds and increased when the reserves fall.

The R. R. B. chairman, whose rebuttal presentation was a statement of 94 mimeographed sheets, was followed by Representative McCowen, Republican of Ohio, who appeared briefly to urge favorable committee action on the bill. Then came the closing argument of R. L. E. A. counsel—Lester P. Schoene, former general counsel of the Retirement Board and now a member of the Washington, D. C., firm of Schoene, Freehill, Kramer & Fanelli.

Railroads Will Be No Post-War Pushover, Bus Men Told

"The railroads give every evidence that they are coming out of the pushover class and intend to go after business with everything they've got," Earl F. Theisinger tells intercity bus men in the April issue of "Bus Transportation." In his article "Watch the Railroads," Mr. Theisinger reminds his readers that the recent Pullman-Standard exhibit in New York, displaying the three-tier sleepers, recreational club lounge, "Threedex" commuter car, diagonal dining arrangements, etc., was clear proof that tomorrow's trains "are being planned with an eye to attracting not only the luxury trade but every day Mr. and Mrs. America."

Warning that the long haul bus man "will have to look diligently to his laurels" to retain his share of the post-war travel business, the author points to what the railroads consider their "aces" in a "winning hand." These, he said, include privacy and luxury, dependability, maximum safety, opportunity for entertainment, space to move about, usable time and numerous accommodations, many of which will "fit the slender budget." It is this last angle which bears notice from the bus men, for, says Mr. Theisinger, "while Tiffany may get the quality customer it's Woolworth that gets the crowds." The prospective "day-nite" coach and the economy sleeper, offering "luxury aplenty" to the long dis-

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Col Bridg ing c shank tance passenger, "should be of greatest concern to the long haul bus operator," Mr. Theisinger believes.

Railroads now "are planning to modernize," he explains, "and in many instances to replace stuffy stations with their Grant's tomb atmosphere," with "smart, new streamlined stations which will smoothly guide the prospective passenger to easily accessible ticket windows, inviting waiting and rest rooms overflowing with conveniences designed to make waiting time pleasant and relaxing."

In all of this, he concludes, "the main thing to remember is that the railroads are laying definite and intelligent plans to make their equipment and their services more attractive than they have ever looked before," and, "it is up to the bus operator to be alert to this fact and plan to meet it with every bit of energy and ingenuity at his command, and be assured it will be no pushover."

Roads Refused Further Hearing in Georgia Rate Case

The Supreme Court on April 22 denied a petition for a rehearing of the motion and a reconsideration of its opinion and order in the State of Georgia vs. Pennsylvania Railroad case, in which the court assumed original jurisdiction and permitted the state to file its amended complaint charging twenty railroads with engaging in a conspiracy to fix rates in violation of the federal anti-trust laws. The petition for rehearing was filed by the eight southern roads named among the defendants, with ten northern roads supporting the southern roads' argument.

As reported in *Railway Age* of March 31, page 584, the Supreme Court, by a 5-to-4 decision, has permitted the state to sue for an injunction to restrain the carriers from making "arbitrary and noncompetitive" joint rates through the operation of rate bureaus "and other private rate-

fixing agencies" which allegedly are "not sanctioned by the Interstate Commerce Act."

The defendant railroads sought further hearing, their brief asserted, because they had not been allowed an adequate opportunity to present their views on the "very narrow issue which now remains tendered." On eleven different points the court approved the defendants' view of the law and the facts involved, they said, leaving Georgia only a suit in equity for an injunction against threatened future injury. Even this ground has been "whittled down" by the court's construction of the complaint, they added, with the result that all it undertakes is to "put an end to discriminatory and coercive practices" in rate-making, if such practices be proved.

Reasoning Falls on Deaf Ears—On the phase of the complaint remaining in litigation, the railroads argued, the court "can enter no injunctive decree which would be effective. Any decree entered would necessarily either (1) be so general as to violate the most elementary principles of justice; (2) directly invade the exclusive jurisdiction of the Interstate Commerce Commission, or (3) directly invade the constitutional powers of the Congress by prescribing a new, legislative rule of civil conduct for the future which Congress itself has not seen fit to prescribe."

The court's opinion, they went on to say, "leaves an inescapable and insoluble dilemma. If the court entertains the complaint and issues an injunction, either its injunction must tell the defendants what they may do and what they may not do in the future in agreeing upon or refusing to agree upon rates, in which case the court will exercise the function of the Interstate Commerce Commission and of the Congress, or the court will issue a purely general injunction, merely enjoining and restraining these defendants permanently from conspiring and using coercion to dis-

criminate against Georgia in the fixing of interstate rates, without in any further way telling us what we can do, or what we cannot do. . . . How could the defendants obey such an injunction? It would be impossible for us to know what we could do or could not do. It would be impossible to know what rates we could fix and agree to without being in contempt of this court. Would we ask the Interstate Commerce Commission, or this court's special master, or the marshall?"

Furthermore, said the defendants, Georgia has no standing to bring this suit on behalf of her citizens, because as to all matters involved in it, as narrowed by the court, the United States, not the state of Georgia, is parens patriae.

Retirement Act Amendment

Representative Shafer, Republican of Michigan, has introduced H.R. 3026 to provide for crediting active service in the armed forces of the Dominion of Canada as military service for purposes of the Railroad Retirement Act.

Snyder Heads Loan Agencies

The Senate this week confirmed President Truman's appointment of John W. Snyder, vice-president of the First National Bank of St. Louis, Mo., to the position of Federal Loan Administrator. He succeeds Director Fred M. Vinson of the Office of War Mobilization and Reconversion who served for a brief period as successor to Jesse H. Jones.

Supreme Court Rules on Meaning of "Commenced"

The Supreme Court of Illinois having made it clear that its judgment in an employee liability case which was appealed to the Supreme Court of the United States resulted "solely" from its interpretation of a federal statute of limitations, the latter court found itself with jurisdiction to review the "federal question" involved and reversed the state court's finding in two related cases—Herb vs. Wabash and Belcher vs. Louisville & Nashville.

The circumstances at issue and the decision of the Supreme Court therein were reported in Railway Age of February 10, page 319. The cases had been instituted in Illinois city courts, and more than two years later, after appeals were taken, the state supreme court held in other cases that city courts did not have jurisdiction as to actions for injuries that occurred outside their territorial limits. Upon a change of venue then to a circuit court, the railroads succeeded in having the cases dismissed, and the state supreme court sustained this action. The United States Supreme Court, however, was unable to determine whether the state court's action was based on "state grounds" or on section 6 of the Federal Employers' Liability Act, which requires that action for damages be commenced within two years from the time of injury.

The state court having explained that it sustained dismissal of the cases on the ground that action was not "commenced" within two years of the date of the injury in a court with power to render judgment on the merits, the Supreme Court, in an



Building Steelwork Fabricated by Cold-Driven Rivet Process

Cold-driven riveting is being used in the steel fabrication for a heavy mill building by the Fort Pitt Bridge Works at Pittsburgh, Pa., which represents the first application of this process to heavy building construction. In the new process, the cold rivet is driven under sufficient pressure to enlarge the shank to fill the hole completely before the head is formed, producing, it is said, increased rivet strength, a greater stress carrying value and improved workmanship over hot-driven rivets.

opinion by Justice Jackson, reversed the lower court. "An action is 'commenced' for these purposes as a matter of federal law when instituted by service of process issued out of a state court," he said, "even if one which itself is unable to proceed to judgment, if the state law or practice directs or permits the transfer through change of venue or otherwise to a court which does have jurisdiction."

Freight Car Loading

Loadings of revenue freight for the week ended April 21 totaled 864,063 cars, the Association of American Railroads announced on April 26. This was an increase of 17,672 cars, or 2.1 per cent over the previous week, an increase of 25,326 cars, or 3.0 per cent over the corresponding period of last year, and an increase of 69,900 cars, or 8.8 per cent over the comparable 1943 week.

Loading of revenue freight for the week ended April 14 totaled 846,391 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue	Freight (Car Loadii	ng
For the Week			
District	1945	1944	1943
Eastern Allegheny Pocahontas Southern Northwestern Central Western Southwestern	163,846 183,547 53,272 129,397 116,492 127,522 72,315	150,649 177,188 52,782 122,722 107,451 115,671 72,220	158,355 174,547 56,822 122,974 83,890 111,700 72,620
Total Western Districts	316,329	295,342	268,210
Total All Roads	846,391	798,683	780,908
Commodities Grain and grain Products Live stock Coal Coke Forest products Ore Merchandise l.c.l. Miscellaneous	49,759 15,422 154,251 12,535 41,368 58,834 114,602 399,620	36,978 14,827 163,370 14,506 43,312 47,420 104,850 373,420	42,589 15,154 170,024 14,932 41,401 21,629 98,285 376,894
April 14 April 7 March 31 March 24 March 17	846,391 764,763 835,226 816,058 815,789	798,683 787,985 786,106 777,578 785,195	780,908 789,019 772,102 787,340 768,134

Cumulative Total.

15 Weeks . . 11,681,022 11,815,521 11,381,837

In Canada.-Carloadings for the week ended April 14 totaled 70,690 as compared with 67,797 for the previous week and 68,037 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
April 14, 1945 April 15, 1944	70,690 68,037	36,566 37,705
Cumulative Totals for Ca	nada:	
April 14, 1945 April 15, 1944 1		557,345 599,736

Trans-Canada Air Lines Reports "Intensive Planning" in '44

In an annual report to "stockholders," (i.e., the people of Canada), H. J. Symington, president of the Dominion-owned Trans-Canada Air Lines said that, while there was an increase in passenger, mail and express traffic in 1944, "more traffic could have been handled had the company possessed the equipment and personnel. Mr. Symington disclosed that in 1944, T. C. A., over its 5,299 miles of routes between the Atlantic and Pacific seaboards,

flew 10,034,805 miles, an increase of 1,-071,019 over the previous year. Trans-Canada Air Lines last year handled 156.884 revenue passengers, as compared with 140,-276 in 1943. During the year 3,739,105 lb. of mail were transported and air express totaled 856,016 lb. These figures, he said, do not include trans-Atlantic service between Montreal and Great Britain, now representing three round-trips weekly. On this run there were carried more than a million pounds of mail.

Operating revenues amounted to \$10,314,-941 in 1944, an increase of \$835,440 over 1943, and operating expenses rose \$1,-095,905, in 1944 totaling \$10,070,807. The principal reasons for increased expenditures, it was noted, were the cost of additional traffic and services, increased cost of labor and materials, a major program of aircraft and flight equipment overhaul and development expenditures in preparation for ex-

panding operations.

"The year," said Mr. Symington, "was one of intensive planning for a time when the air line will not only multiply its domestic services but also, as the sole Canadian agency designated by the government to operate international air services, extend its operations beyond the nation's frontiers. Trans-Canada Air Line," he went on, "intends to increase both transcontinental and inter-city schedules as rapidly as the availability of necessary personnel and equipment will permit."

Postpone Effective Date of Order in Auto Rate Case

The Interstate Commerce Commission has postponed from June 6 to August 6 the effective date of its order in the No. 28190 proceeding which involves rates and practices applying to the transportation of new automobiles. As noted in the Railway Age of March 3, page 426, the order requires the adjustment of rail rates where they exceed 75 per cent of the corresponding first-class rates, minimum 12,000 lb.

The postponement order also extends to June 1 the time for filing petitions for reargument or reconsideration. The commission's action followed its consideration of "letter requests" of railroads operating in western and southern territories.

Supervisors Training Course of Benefit, Says Wyer

While "a few short-sighted ones" may have gained nothing from the supervisory training program recently completed on the Jersey Central, Chief Executive William Wyer believes that the majority of the 600 participating officers and supervisors did profit from the films and the conference discussions incorporated in the 10-month self-improvement program. And, he suggests, if the comments thus far received are any indication, "benefits will be considerable to all employees, rank-and-file and supervisors alike."

Though not always in "agreement with all the films," which demonstrated right and wrong methods of employee training, safety, planning the day, and other supervisory duties, a number of participants have expressed their "regret" that the meetings are concluded, and most supervisors who took the course are in agree-

ment that "the brush-up is good for all." One felt the lessons gave him "a better insight into men," while another admitted he now felt no hesitancy at shifting men about when he "sensed friction," though before taking the course he doubted the value of such changes. And, while many were familiar with the lessons illustrated and discussed, they approved of "the or-derly arrangement" which stamps them "indelibly in mind."

At the first showing ten months ago of the right and wrong technique for breaking in a new employee, one yardmaster was heard to remark of the demonstrated "wrong way," "If I was treated like those guys, somebody would get a punch on yea

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Bridge & Building Association Cancels Three-Day Meeting

At a meeting of the Executive committee of the American Railway Bridge and Building Association, plans for a three-day annual meeting in Chicago on October 16, 17 and 18, were abandoned, in favor of a one-day meeting, to be held at the Hotel Stevens, Chicago, on October 17. meeting will be designated an annual meeting to permit, under the constitution of the association, the transaction of essential business and the election of officers, but attendance at it will be restricted to the officers and directors of the association. the chairmen and vice-chairmen of technical committees, and to other members within and about Chicago. The primary feature of the meeting will be the presentation of the eight technical reports upon which committees have been working since last fall.

Can't Issue Injunction After Grounds Were Waived

A federal district court injunction setting aside an Interstate Commerce Commission order restricting a trucker's operations to traffic moving on bills of lading of freight forwarders after the trucker had waived objections to such restriction. in proceedings before the commission, was improperly issued, the Supreme Court of the United States held April 22 in an opinion by Justice Roberts. There were no dissenting views, though Justice Black was indicated as concurring in the result.

Two related cases, growing out of the same commission proceeding, were before the court-U. S. vs. Hancock Truck Lines and American Trucking Associations vs. Hancock Truck Lines. Hancock is a motor carrier which acquired the rights of Globe Cartage Company, which were the subject of a Division 5 report giving Globe a common carrier certificate on the basis of "grandfather" operations, but for less than all the routes embraced in the application. In addition, its rights were limited to handling forwarders' traffic.

The full commission was asked to, and did, reconsider the application as respects the routes permitted, but the trucker at that time "waived objection to the restriction of its traffic to service of freight forwarders." The commission did not broaden the territorial restrictions, and Hancock sued for an injunction, but based its suit not on the territorial restriction but on the

UNION PACIFIC RAILROAD COMPANY

Forty-Eighth Annual Report—Year Ended December 31, 1944

To the Stockholders of Union Pacific Railroad Company:

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The Board of Directors submits the following report for the year ended December 31, 1944, for the Union Pacific Railroad Company, including Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company, whose properties are leased to the Union Pacific Railroad Company. The lessor companies have certain income and charges, and the figures in the Income Account, other than those relating to transportation operations, and in the Surplus Account and General Balance Sheet and tabulations and tables relating thereto are stated on a consolidated basis, excluding offsetting accounts between the

Income

The operated mileage at close of year and income for the year 1944, compared with 1943, were as follows:

Operated Mileage at Close of Year	1944	1943	INCREASE	DECREASE
Miles or road Miles of additional main track Miles of yard tracks and sidings	9,780.50 1,541.38 4,394.06	9,781.57 1,540.07 4,360.73	1.31 33.33	1.07
Total Mileage Operated	15,715.94	15,682.37	33.57	
Transportation Operations				
Operating revenues	\$506,590,966.01 314,959,801.98	\$480,274,934.19 300,074,772.40	\$26,316,031.82 14,885,029.58	
Revenues over expenses Taxes	\$191,631,164.03 141,806,202.65	\$180,200,161.79 126,063,144.79	\$11,431,002.24 15,743,057.86	
Railway Operating Income Rents from use of joint tracks, yards, and terminal facilities	\$49,824,961.38 1,867,788.11	\$54,137,017.00 1,806,832.53	\$60,955.58	\$4,312,055.62
	\$51,962,749.49	\$55,943,849.53		\$4,251,100.04
Hire of equipment—debit balance Rents for use of joint tracks, yards, and terminal facilities	\$11,599,125.91 3,567,608.17	\$11,769,780.36 2,968,214.03	\$599,394.14	\$170,654.45
	\$15,166,734.08	\$14,737,994.39	\$428,739.69	
Net income from Transportation Operations	\$36,526,015.41	\$41,205,855.14		\$4,679,839.73
Income from Investments and Sources other than Transportation Operations Income from oil operations in Southern California—net	\$7,681,904.09	\$8,836,651.48		\$1,154,747.39
Dividends on stocks owned Interest on bonds, notes and equipment trust certificates owned Income from unfunded securities and accounts Rents from lease of road and equipment Miscellaneous rents	5,264,019.50 2,149,737.90 1,805,198.14 172,242.87 432,680.43	4,646,877.50 1,968,880.78 1,036,950.32(a) 188,050.06 404,982.51	\$617,142.00 180,857.12 768,247.82 27,697.92	15,807.19
Miscellaneous rents Miscellaneous income	2,895,634.95	1,793,638.08	1,101,996.87	
Total	\$20,401,417.88	\$18,876,030.73	\$1,525,387.15	
Total Income	\$56,927,433.29	\$60,081,885.87	******	\$3,154,452.58
Fixed and Other Charges				
Interest on funded debt Interest on unfunded debt Miscellaneous rents Miscellaneous charges	\$14,110,071.76 1,029,609.23 50,872.48 665,985.04	\$13,570,444.39 567,147.93 48,975.15 602,059.43	\$539,627.37 462,461.30 1,897.33 63,925.61	
Total	\$15,856,538.51	\$14,788,626.90	\$1,067,911.61	
Net Income from All Sources Released from "Reserve against possible refunds on U. S. Government	\$41,070,894.78	\$45,293,258.97		\$4,222,364.19
shipments"	859,019.55	*******	\$859,019.55	
Total for Disposition	\$41,929,914.33	\$45,293,258.97		\$3,363,344.64
Appropriated to "Reserve against possible refunds on U. S. Government shipments"		\$10,000,000.00		\$10,000,000.00
Dividends on Stock of Union Pacific Railroad Co.: Preferred stock:	\$3,981,724.00	\$3,981,724.00		
Common stock: 1½ per-cent paid April 1, 1944 \$3,334,365.00 1½ per cent paid July 1, 1944 3,334,365.00 1½ per cent paid October 2, 1944 3,334,365.00 1½ per cent payable January 2, 1945 3,334,365.00	13,337,460.00 ·	13,337,460.00		
Total Dividends	\$17,319,184.00	\$17,319,184.00		
			86 626 658 26	
Transferred to Earned Surplus—Unappropriated	\$24,610,730.33	\$17,974,074.97	\$6,636,655.36	

(a) Principally interest on short-term U. S. Government obligations.

Expenditures Chargeable to Investment in Road and Equipment Property:

\$7,150,025.57 Credits to investment in Road and Equipment Property: 11,699,999.75 Cost of property retired and not replaced Cost of equipment retired Additions and Betterments (excluding equipment) \$1,113,266.56 1,016,659.24

Total Credits \$2,129,925.80

-Net increase in investment in "Road and Equipment Prop-2 erty" Total Expenditures \$18,850,025,32

\$16,720,099.52

Railway Age-Vol. 118, No. 17

[Advertisement]

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Operating Results for Year 1944 Compared with Year 1943

Average miles of road operated	1944 9,781.57	1943 9,817.07		INCREASE	DEC	CREASE 35.50	Per Cent.
Freight OPERATING REVENUES Passenger Mail Express Other passenger-train Switching Other	\$377,242,607.50 91,571,983.54 8,617,087.89 7,572,964.98 10,088,014.08 2,847,164.45 8,651,143.57	\$357,590,629.30 86,742,472.28 7,591,031.31 6,948,722.07 10,856,957.62 2,804,776.72 7,740,344.89	4	0,651,978.20 1,829,511.26 1,026,056.58 624,242.91 42,387.73 910,798.68	\$7	768,943.54	5.5 5.6 13.5 9.0 7.1 1.5 11.8
Total operating revenues	\$506,590,966.01	\$480,274,934.19	\$26	5,316,031.82			5.5
Maintenance of way and structures *Maintenance of equipment	\$63,195,849.39 85,426,029.59	\$66,153,250.85 82,040,968.89	\$3	3,385,060.70	\$2,9	957,401.46	4.5
Total maintenance Traffic Transportation—rail line Miscellaneous operations General	\$148,621,878.98 7,010,819.92 137,571,730.46 13,392,357.28 8,363,015.34	\$148,194,219.74 5,737,895.88 125,863,402.08 12,296,457.31 7,982,797.39	11	\$427,659.24 1,272,924.04 1,708,328.38 1,095,899.97 380,217.95			.3 22.2 9.3 8.9 4.8
Total operating expenses	\$314,959,801.98	\$300,074,772.40	\$14	,885,029.58			5.0
Revenues over expenses	\$191,631,164.03	\$180,200,161.79	\$11	,431,002.24			6.3
State and county	\$10,332,893.57	\$10,006,674.26	1	\$326,219.31			3.3
Federal income and excess-profits Federal capital stock Federal unemployment insurance Federal retirement Other federal		\$103,000,000.00 2,095,026.49 5,216,242.79 5,653,102.61 92,098.64	\$15	3,000,000.00 350,924.76 127,816.25		329,939.65 31,962.81	14.6 16.8 .6 .6 138.8
General Balance	Sheet — A	Assets					
	December 31, 1944	December 31, 1943	,	INCREASI	E ·	DECRE	ASE
Investments: ROAD AND EQUIPMENT	\$1,054,782,257.71		8.19	\$16,720,09			104
Less: Receibts from imbrovement and equipment fund	\$23,823,091.13			-			
Appropriations from income and surplus prior to July 1, 1907, credited to this account	13,310,236.52						
Total	\$37,133,327.65						
Road and equipment property	\$1,017,648,930.06	\$1,000,928,830		\$16,720,099	2.52		
OONATIONS AND GRANTS (Credit)	\$11,631,237.76			\$29,35			
	\$50.00		0.00	927,00	0.72		
SINKING FUNDS				#1 006 90	0.07	-	
DEPOSITS WITH TRUSTEES'IN LIEU OF MORTGAGED PROPERTY	\$2,083,908.41	\$87,099		\$1,996,80			
MISCELLANEOUS PHYSICAL PROPERTY	\$23,677,245.67	\$23,415,009).00	\$262,23	6.67		
Investments in affiliated companies: Stocks Bonds and notes Advances	\$18,679,185.24 4,268,113.87 10,715,399.34	\$18,679,175 4,244,230 11,822,158	8.87	\$1 23,88		· \$1,106,	
Total	\$33,662,698.45	\$34,745,564	.19	• • • • •	===	\$1,082,8	365.74
Investments in other companies: Stocks Bonds and notes	\$64,405,621.39 26,512,159.28	\$62,835,342 35,296,364		\$1,570,279		\$8,784,	204.95
			-			\$7,213,9	25.87
Total	\$90,917,780.67	\$98,131,706				7.,,	_
	\$90,917,780.67 \$34,409 ,009.57	\$98,131,706 \$34,460,580				(a) \$51,	571.1
			0.68				571.1
Total Investments Current Assets: CASH TEMPORARY CASH INVESTMENTS (U. S. Government securities) SPECIAL DEPOSITS	\$34,409,009.57 \$1,121,950,365.93 \$39,902,444.67 200,000,000.00 4,665,663.92 290.88	\$34,460,586 \$1,111,245,797 \$49,668,817 150,000,000 1,190,326	7.89 7.16 0.00 6.88	\$10,704,566 \$50,000,000 3,475,332	8.04 0.00 7.04	(a) \$51,5 \$9,766,5	372.49
RESERVE FOR ADJUSTMENT OF INVESTMENTS IN SECURITIES (Credit) Total Investments Current Assets: CASH TEMPORARY CASH INVESTMENTS (U. S. Government securities) SPECIAL DEPOSITS LOANS AND BILLS RECEIVABLE TRAFFIC AND CAR-SERVICE BALANCES—NET NET BALANCE RECEIVABLE EROM AGENTS AND CONDUCTORS MISCELLANEOUS ACCOUNTS RECEIVABLE MATERIAL AND SUPPLIES INTEREST AND DIVIDENDS RECEIVABLE RENTS RECEIVABLE RENTS RECEIVABLE	\$34,409,009.57 \$1,121,950,365.93 \$39,902,444.67 200,000,000.00 4,665,663.92	\$34,460,586 \$1,111,245,797 \$49,668,817 150,000,000 1,190,326	7.16 0.00 6.88 1.67 9.20 3.18 2.90 6.62 7.87	\$10,704,560 \$50,000,000	8.04 0.00 7.04 6.73	\$9,766,3 \$9,766,3 4 2,227,2 9,088,8 472,3	372.49 400.79 282.54 879.03
Total Investments Current Assets: Cash Temporary cash investments (U. S. Government securities) Special deposits Loans and bills receivable Traffic and car-service balances—net Net balance receivable erom agents and conductors. Miscellaneous accounts receivable Material and supplies Interest and dividends receivable	\$34,409,009.57 \$1,121,950,365.93 \$39,902,444.67 200,000,000.00 4,665,663.92 290.88 7,963,655.93 6,925,360.64 29,218,263.87 36,798,727.30 1,973,037.27	\$34,460,586 \$1,111,245,797 \$49,668,817 150,000,000 1,190,326 6,231,459 9,152,643 38,307,142 37,271,076 1,385,807	7.16 0.00 7.16 0.00 6.88 1.67 9.20 3.18 2.90 5.62 7.87 7.44	\$10,704,560 \$50,000,000 3,475,337 1,732,196	8.04 0.00 7.04 6.73	\$9,766,3 \$9,766,3 4 2,227,2 9,088,8 472,3	372.4 400.7 282.5 879.0 349.3 352.4 044.0
Total Investments Current Assets: CASH TEMPORARY CASH INVESTMENTS (U. S. Government securities) SPECIAL DEPOSITS LOANS AND BILLS RECEIVABLE TRAFFIC AND CAR-SERVICE BALANCES—NET NET BALANCE RECEIVABLE ROM AGENTS AND CONDUCTORS MISCELLANEOUS ACCOUNTS RECEIVABLE MATERIAL AND SUPPLIES INTEREST AND DIVIDENDS RECEIVABLE RENTS RECEIVABLE OTHER CURRENT ASSETS: Baltimore and Ohio Railroad Co. capital stock applicable to payment of extra dividend of 1914	\$34,409,009.57 \$1,121,950,365.93 \$39,902,444.67 200,000,000.00 4,665,663.92 290.88 7,963,655.93 6,925,360.64 29,218,263.87 36,798,727.30 1,973,037.27 73,894.98 110,315,10	\$34,460,586 \$1,111,245,797 \$49,668,817 150,000,000 1,190,322 623,459 9,152,643 38,307,142 37,271,076 1,385,807 74,247	7.16 0.00 6.88 1.67 9.20 3.18 2.90 5.62 7.44 0.10	\$10,704,566 \$50,000,000 3,475,333 1,732,190 587,229	8.04 0.00 7.04 6.73	\$9,766,3 \$9,766,3 4 2,227,2 9,088,8 472,3	372.49 400.79 282.54 879.03 349.32 352.46
Total Investments Current Assets: CASH TEMPORARY CASH INVESTMENTS (U. S. Government securities) SPECIAL DEPOSITS LOANS AND BILLS RECEIVABLE TRAFFIC AND CAR-SERVICE BALANCES—NET NET BALANCE RECEIVABLE EROM AGENTS AND CONDUCTORS MISCELLANEOUS ACCOUNTS RECEIVABLE MATERIAL AND SUPPLIES INTEREST AND DIVIDENDS RECEIVABLE RENTS RECEIVABLE OTHER CURRENT ASSETS: Baltimore and Ohio Railroad Co. capital stock applicable to payment of extra dividend of 1914 Miscellaneous items	\$34,409,009.57 \$1,121,950,365.93 \$39,902,444.67 200,000,000.00 4,665,663.92 290.88 7,963,655.93 6,925,360.64 29,218,263.87 36,798,727.30 1,973,037.27 73,894.98 110,315,10 4,381.49	\$34,460,586 \$1,111,245,797 \$49,668,817 150,000,000 1,190,320 6191 6,231,459 9,152,643 38,307,142 37,271,076 1,385,807 74,247 111,359 26,110	7.16 0.00 6.88 1.67 9.20 3.18 9.20 3.18 7.44 9.10 9.10 9.10	\$10,704,566 \$50,000,000 3,475,337 1,732,196	8.04 0.00 7.04 6.73 9.40 4.00	\$9,766,3 \$9,766,3 4 2,227,2 9,088,8 472,3	372.49 400.79 282.54 879.03 349.32

(a) Principally loss from sale of Baltimore & Ohio R. R. Co. common stock, charged to this account.

Total Deferred Assets

Unadjusted Debits:
RENTS AND INSURANCE PREMIUMS PAID IN ADVANCE
DISCOUNT ON FUNDED DEBT
OTHER UNADJUSTED DEBITS

Total Unadjusted Debits

\$50,939,551.83

\$56,559.14

6,572,379.38

\$6,628,938.52

\$1,507,154,892.33

\$45,764,733.93

\$14,689.20 541,440.32 4,973,782.49

\$5,529,912.01

\$1,455,960,125.88

\$541,440.32

\$5,174,817.90

\$41,869.94

1,598,596.89

\$1,099,026.51

\$51,194,766.45

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Operating Results for Year 1944 Compared with Year 1943—Continued

Total federal	\$131,473,309.08	\$116,056,470.53	\$15,416,838.55	******	13.3
Total taxes	\$141,806,202.65	\$126,063,144.79	\$15,743,057.86		12.5
Railway operating income Equipment rents (debit) Joint facility rents (debit)	11,599,125.91	\$54,137,017.00 11,769,780.36 1,161,381.50	\$538,438.56	\$4,312,055.62 170,654.45	8.0 1.4 46.4
Net railway operating income	\$36,526,015.41	\$41,205,855.14		\$4,679,839.73	11.4
Per cent-Operating expenses of operating revenues	62.17	62.48		.31	.5
FREIGHT TRAFFIC (Commercial Freight only) Tons of revenue freight carried Ton-miles, revenue freight Average distance hauled per ton (miles) Average revenue per ton-mile (cents) Average revenue per freight-train mile PASSENGER TRAFFIC (Excludes Motor-Car Trains)	37,125,602,435 650.00 1.016	53,707,020 35,114,333,801 653,81 1,018 \$9.84	3,409,581 2,011,268,634 \$.43	3.81 .002	6.3 5.7 .6 .2 4.4
Revenue passengers carried Revenue passengers carried one mile Average distance hauled per passenger (miles) Average passengers per passenger-train mile Average revenue per passenger-mile (cents) Average revenue per passenger-train mile, passengers only Average total revenue per passenger-train mile	-763.97 290.65	6,837,683 5,055,572,955 739,37 268.07 1.711 \$4.59 \$5.47	319,102 412,022,887 24,60 22.58 \$.26 \$.27	.041	4.7 8.1 3.3 8.4 2.4 5.7 4.9
* Includes depreciation, amortization and retirement charges: Maintenance of way and structures Maintenance of equipment	\$5,004,780.57 14,965,085.50	\$5,726,974.51 13,869,226.25	\$1,095,859.25	\$722,193.94	

General Balance Sheet - Liabilities

	December 31, 1944	December 31, 1943	INCREASE	DECREASE
Capital Stock Common stock Preferred stock	\$222,302,500.00 99,591,580.79	\$222,302,500.00 99,591,580.79	në oil or m	057.
Total Capital Stock	\$321,894,080.79 373,252,258.50	\$321,894,080.79 368,713,027.66	\$4,539,230.84	
Total	\$695,146,339.29	\$690,607,108.45	\$4,539,230.84	
Due to Affiliated Companies		\$7,256,427.72	\$240,966.20	
Current Liabilities:	47,137,1030132			
AUDITED ACCOUNTS AND WAGES PAYABLE	1 599 992 77	\$21,172,642.15 1,357,291.37	\$2,537,886.32 242,701.40	
INTEREST MATURED UNPAID: Coupons matured, but not presented Coupons and interest on registered bonds, due first proximo DIVIDENDS MATURED UNPAID:		1,198,563.76 4,056,795.70	390,433.00	\$1,110,495.70
Dividends due but uncalled for Extra dividend on common stock declared January 8, 1914, payable to stockholders of record March 2, 1914, unpaid. Dividend on common stock payable second proximo. UNMATURED INTEREST ACCRUED	299,211.30	256,918.58	42,292.72	
stockholders of record March 2, 1914, unpaid	119,058.41	120,187.05		1,128.64
Dividend on common stock payable second proximo	3,334,365.00 1,143,140.42	3,334,365.00 678,689.99	464,450.43	
UNMATURED RENIS ACCRUED	240,003.73	223,594.18	17,011.77	
Accrued tax liability Other current liabilities	141,920,620.43 4,115,391.14	126,622,054.84 11,721,771.57	15,298,565.59	7,606,380.43
				7,000,300.43
Total Current Liabilities	\$181,018,210.65	\$170,742,874.19	\$10,275,336.46	
Deferred Liabilities: OTHER DEFERRED LIABILITIES	\$9,784,250.55	\$10,617,435.15		\$833,184.60
Unadjusted Credits:	15 7			
Unadjusted Credits: PREMIUM ON FUNDED DEBT RESERVE FOR FIRE INSURANCE	\$1,162,244.58	\$68,358.34	\$1,093,886.24	
RESERVE FOR FIRE INSURANCE RESERVE EOR DEPRECIATION	12,904,361.41 167,378,228.15	12,038,375.50 154,248,449,16	865,985.91 13,129,778.99	
RESERVE FOR AMORTIZATION OF NATIONAL DEFENSE PROJECTS	16,991,262.75	10,064,407.87	6,926,854.88	
Contingent interest Miscellaneous items	535,866.36 20,481,442.23	1,854,700.72 24,425,546.03		\$1,318,834.36 3,944,103.80
Total Unadjusted Credits	\$219,453,405.48	\$202,699,837.62	\$16,753,567.86	
Total Liabilities	\$1,112,899,599.89	\$1,081,923,683.13	\$30,975,916.76	
Surplus:	\$860.00	\$860.00	-11	
Surplus: PAID-IN SURPLUS EARNED SURPLUS—APPROPRIATED: Additions and betterments Funded debt retired through income and surplus.	φου.υυ			
Additions and betterments	\$28,522,3 5 2.23 2,358,998.66	\$28,522,352.23 2,303,568.66	\$55,430.00	
Sinking fund reserves Estimated post-war refund of federal excess-profits taxes	50.00	50.00	430,100.00	
Estimated post-war refund of federal excess-profits taxes	9,140,980.45	7,969,203.00 10,000,000.00		\$7,969,203.00 859,019.55
Total Earned Surplus-Appropriated	\$40,022,381.34	\$48,795,173.89		\$8,772,792.55
Earned Surplus—Unappropriated	\$314,661,881.36	\$285,670,239.12	\$28,991,642.24	
Total Earned Surplus	\$354,684,262.70	\$334,465,413.01	\$20,218,849.69	
Total Surplus'		\$334,466,273.01	\$20,218,849.69	
As this consolidated belongs short analysis all intercompany items assuri				
				11 24
ties of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face	1 10			
ties of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face value of such securities as carried on the books of the issuing companies (less unextinguished discount on the bonds and discount charged to Earned Surplus—Unappropriated but added back in consolidating		(a)		
As this consolidated balance sheet excludes all intercompany items, securities of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face value of such securities as carried on the books of the issuing companies (less unextinguished discount on the bonds and discount charged to Earned Surplus—Unappropriated but added back in consolidating the accounts) and the amounts at which the securities are carried on the books of the owning companies is set up here to balance.	\$39,570,169.74	\$39,570,169.74		

er nt. .4 5.5 5.6 3.5 9.0 7.1 11.5 5.5

4.5 4.1 .3 2.2 9.3 8.9 4.8 5.0

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provision limiting its operations to forwarders' traffic, which it had not challenged before the commission. The district court granted the relief sought, and the case was appealed to the Supreme Court.

After disposing of technical legal questions involved in the appeal, Justice Roberts held that "it was manifestly improper to reverse the commission's order in respect of a provision therein as to which the suitor had advised that body it no longer objected but acquiesced. The record disclosed this situation, the defensive pleading relied upon it, and the court was asked to dismiss because of it. The complaint should have been dismissed."

The appeal was taken to the Supreme Court, however, on the "substantive question of the statutory power of the commission" with reference to limitations of certificates based on grandfather date operations. Having taken jurisdiction and listened to argument on the merits, the court, said Justice Roberts, found itself in the "anomalous position" of being unable to pass upon the commission's action because of the lower court's error in allowing an injunction on improper grounds.

Managers of Fairs Get O. D. T. Advice to Go Slow

Because of the increasing heavy demands being placed on rail and rubber borne transportation, Col. J. Monroe Johnson, director of the Office of Defense Transportation, has warned managers of state, regional and county fairs not to make elaborate advance preparations for such events this coming summer and fall. He said that "those who do so are proceeding at their own risk.'

Colonel Johnson asserted that many problems facing transportation are becoming so acute that it may be necessary to restrict the holding of fairs in order to further reduce the travel load. In such an event, he pointed out, fair managers would find that advance preparations would be wasted.

"Locomotives and railroad cars are being taxed to the utmost to maintain military and essential civilian transportation," Colonel Johnson said. "Shortages of manpower and equipment make it impossible to place any additional traffic load on the railroads. Furthermore, the burden of war-time freight and passenger traffic will not diminish appreciably after the collapse of Germany. In some parts of the country it will be heavier and will present many difficult routing and turn-around problems."

Illinois Central Makes Records Available to Historians

The Illinois Central is in process of turning over to the Newberry Library, Chicago, its old records of historic interest-where they will be made available for study by competent historical scholars. The goal is thus to deposit all significant records covering the period 1851-1906.

The most valuable contribution to date is believed to be the series of indexed correspondence files from the president's office, running from 1855 to 1906. These bound and well-preserved volumes contain copies of the outgoing letters of Presidents Osborn, Douglas, Newell, Ackerman, Clarke and Fish, as well as those of Vice-

President G. B. McClellan. The president's office was also able to add to the collection the incoming letters of Presidents Ackerman, Clarke and Fish. The only term of office between 1855 and 1906 not covered by the files is that of President Hunt.

A few of the unusual items which came to light are the following:

A plat of the station property leased to the N. Y. C. & St. L. in April, 1882, showing the track layout in the vicinity of Twelfth street, Chicago

Chicago
A rare pamphlet entitled "Guide to the Illinois Central Railroad Lands" published in 1867 by the land department "opposite the Great Central Depot." It describes soil, climate, products, prices and inducements to settlers, and prints a list of stations and complete descriptions of the towns and villages in the company's territory.

A report submitted by President Fish to the Board of directors on May 16, 1906, which covers generally the period between 1886 and 1906.

A report signed by Chairman Osborn, dated becember 20, 1882, relating to the fusion of the C. St. L. & N. O. Railroad Company with the Illinois Central.

A packet of material relating to land grant rate

A nacket of material relating to land grant rate disputes during Civil War days, including a copy of a letter from Lincoln to the Secretary of War, and a packet of material on the Lake Front Ordinance.

There is also a collection by C. J. Corliss of letters pertaining to early Illinois Central affairs.

The Illinois Central deposit also contains some 800 books of account of the Illinois Central and of predecessor and subsidiary companies, all prior to June 30, 1906. In many instances the books of sundry accounts contain impression copies of letters written by presidents and vice-presidents as well as brief reports on properties. The search for old records is continuing and, as more of these are found, the collection will be enlarged.

How the Railroads Acquaint Children with the Industry

School teachers in the territory served by the Southern Railway are being invited to write for free copies of the railway's new "Pupil's Railroad Kit," to supplement the "Teacher's Kit on Railroad Transportation" distributed by the Association of American Railroads. The invitation is extended in the railway's current advertisements in state teachers' magazines.

Developed primarily to answer the many requests received from children for pictures and information about the Southern, the "Pupil's Kit" includes a letter of transmittal addressed to the children and signed by the railway's president, a scrapbook collection of 31 captioned pictures, a dictionary of railroad "slanguage," an explanation of railroad whistle signals, a blotter dramatizing the volume of business done by the railroad in a year, a pocket calendar illustrated with a picture of a Southern Diesel freight locomotive, a pamphlet on grade crossing safety, colored reproductions of the railway's streamliners, a brief history of the Southern, and the A. A. R.'s picture book entitled "Railroads at Work," its bibliography of railway literature, and its quiz book on railroads and railroading.

The "Teacher's Kit on Railroad Transportation" referred to above, was issued by the Association of American Railroads in 1942, as part of the program developed by the Association in recent years to help young people become better acquainted with railroads and their place in American life. It consists of a set of 56 pictures, a teacher's manual, and a booklet entitled "The

Stories Behind the Pictures." It was designed primarily for use in grades up to and including junior high schools, but in practice it has been found useful, and has been used, by teachers in all grades, and even, to some extent, in college teaching. Unexpected but gratifying uses of it have occurred in teachers' colleges as a demonstration of the possibilities in the unit method of instruction, and in connection with training schools conducted by the Army, especially those of the Transportation Corps, which has used the kit as a text in officers' training classes. Since it was issued in 1942, the kit has been reprinted four times and revised and brought up to date three times. It is furnished only on request to teachers, school authorities or others engaged in educational work.

Supplementary to the Teacher's Kit is the 72-page booklet entitled "Railroads at Work," intended for use by pupils in connection with instruction in transportation units. It contains all the pictures included in the Kit for teachers, with short stories about each picture.

While not issued specifically as supplements to the Teacher's Kit, several other publications of the Association have proved to be valuable in connection with school work. The "Quiz on Railroads and Railroading" has been revised extensively twice and is now undergoing a third revision. A large portion of the more than one million copies that have been distributed have been for use in connection with educational activities. This booklet, incidently, is extremely useful to any one called upon to answer questions about the railroads. "Railway Literature—A Bibliography" was first issued in 1937. It has been extensively revised twice, and while it is distributed to the general public on request, its primary use has been in connection with educational activities. A third publication of the Association popular among teachers is the "List of Motion Pictures Owned By or Relating to the American Railroads" and available for school showing.

I. C. C. Likes Bulwinkle Bill; **Proposes Modifications**

Through a report of its legislative committee, consisting of Commissioners Splawn, Mahaffie and Rogers, the Interstate Commerce Commission has advised Chairman Lea of the House Committee on interstate and foreign commerce that it favors the 'general plan" of the bill (H.R. 2536) of Representative Bulwinkle, Democrat of North Carolina, to amend the Interstate Commerce Act to provide for exemption from the operation of the anti-trust laws of joint agreements between carriers to which the commission has given its approval.

This bill, the report said, "appears to have been drafted for the purpose of meeting the need pointed out in" the commission's last annual report (outlined in Railway Age of January 13, page 149) for "regulation of two or more common carriers or freight forwarders subject to the act, when they agree upon and act jointly through a bureau, conference, or association in establishing rates, fares, charges, etc." The commission's committee expressed the view that, under the provisions

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of the Bulwinkle bill, with certain suggested modifications, "our power to regulate the rate bureaus would be adequate."

The introduction of this bill was noted Railway Age of March 17, page 522. The recommendations in the report dealt nainly with a more precise statement of certain requirements and with the inclusion of contract carriers within the scope of the proposed amendment. The committee would substitute for the "indefinite" standard of regulation set forth in the bill one requiring the commission to find, before approving any joint agreement, that the object of the agreement is appropriate for the proper performance of the carriers' service, is consistent with the national transportation policy, and will not unduly restrain competition.

Favors Hearings—At the commission's option, public hearings would be held before making such a finding, but it would be required to give notice and opportunity for hearing before terminating any ap-

proved agreement.

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The report also called attention to another recommendation in the commission's annual report, containing "two other features which have generally been considered important in connection with this subject," namely, the power of the commission to require reports from rate bureaus and similar organizations and to inspect their records. Such provisions, it said, would "effectively complement" the purpose of the bill, and with the suggested changes the committee recommended that the bill pass.

The significance of this bill, in the light of current efforts of the Anti-Trust Division of the Department of Justice to obtain injunctions against the operation of carriers' rate-making machinery, on charges of illegal conspiracy, was the subject of editorial discussion in Railway Age of April 14, under the title "Congress Can

Still Be Boss."

Floods Continue to Delay S. W. Traffic

(Continued from page 763)

Service Restored-Normal service via the T. & P. was restored on April 6 between Texarkana and Longview, on which date the Missouri Pacific's line to Houston and San Antonio was also returned to service. Operations over the T. & P.'s main line into Dallas and Ft. Worth was not restored until April 10. The Cotton Belt resumed normal train service between Texarkana and Mt. Pleasant, thence to Dallas, on April 5, and between Mt. Pleasant and Tyler on April 6. The main line of the Cotton Belt between Tyler and Waco was also broken near Trinidad, Tex., when it was covered by back waters of the Trinity river. This line was out of service from March 30 until April 2.

In Arkansas, the main lines of both the Missouri Pacific and the Cotton Belt were out of service. The first line to go out was that of the Missouri Pacific between Ft. Smith and Little Rock, when rising waters

in the Arkansas river washed out 200 ft. of track near Conway on March 21. This line was restored on March 29, but was again washed out on March 31. Final repairs were not completed until April 4. While this line was out of service freight traffic was rerouted via the White River division through Batesville, Ark. Passenger traffic was handled across the 30-mile gap between Conway and Little Rock via buses of the Missouri Pacific Transportation Company, thence by rail over normal routes.

Further south, the main line of the Missouri Pacific from Little Rock to Texarkana was broken at Bierne, Ark., on March 31 and service was restored on April 1, 36 hours later. Passenger trains were detoured via Pine Bluff and the Cotton Belt. On the Cotton Belt, near record floods in the Red river forced discontinuance of operations over its main line to Texas, at Garland City, Ark., on April 2. Service was restored on April 4. During this same period the Kansas City Southern and the Louisiana & Arkansas also suffered from flood conditions.

More Heavy Rains—During the week of April 8 and 15, further heavy rains fell in Oklahoma, Kansas and Missouri resulting in additional interruptions to railroad service over a widespread area. In Arkansas, the Missouri Pacific's main line from Little Rock to the west was again washed out between Little Rock and Conway on April 22, remaining out of service until April 25. The White River division of the Missouri Pacific was flooded out on April 15 and at last reports on April 25 was still out of service.

In Oklahoma, the Missouri Pacific's main line from Kansas City to Little Rock was ruptured at Ashby on April 15, and remained out of service until the 22nd. The Missouri-Kansas-Texas' main line to Texas was washed out early on the morning of April 12 and it was not expected that the break would be repaired before the end of the week of April 22. The Chicago, Rock Island & Pacific, the Atchison, Topeka & Santa Fe, the Kansas City Southern, the St. Louis-San Francisco and the Kansas, Oklahoma & Gulf were also hard hit in Oklahoma.

Some Service Still Unrestored-To the north, in Kansas, secondary main lines of the Frisco were cut in the vicinity of Beaumont, Cherryvale, Neodesha and Augusta. The main line of the Katy, south of Paola, Kan., was under seven feet of water and was out of service from April 16 to 19. On the Missouri Pacific, high water from the Marias des Cygnes River near Ottawa and Osawatomie cut service on both the main line from Kansas City to the west and from Kansas City to Oklahoma from April 16 to 18. Some traffic was diverted to Missouri Pacific lines through Pleasant Hill, Mo., and Durand, Kan., while the remainder was diverted to the Union Pacific from Kansas City to Salina, Kan.

In Missouri, high waters caused interruptions to service on the Frisco in the vicinity of Neosho, Mo., between April 14 and 16, while in the northern part of the state the Wabash was unable to operate over its line to Omaha, Neb., in the vicinity of Stanberry, Mo., from April 15 to 17.

As a result of threats to towns along the Mississippi river, Baton Rouge, La, and south, the U. S. Engineers, on April 6, ordered that gaps where the main lines of the L. & A. and T. & P. cross the Morganza spillway be filled preparatory to blowing fuse plugs in the main levee. Railroad service on these lines was discontinued as of that date and had not been restored up to April 25, although it had not yet been necessary to open the floodway. Detour routes via the Texas & New Orleans to Opelousas, thence the Missouri Pacific are being operated in this territory.

8000 New York Expressmen In One-Day Walk-Out

In an attempt to settle differences, which on April 18 resulted in a one-day walk-out of 8,000 employees, there was a meeting on April 27 between the general manager of the Railway Express Agency and union representatives at the headquarters of the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, an A. F. L. affiliate, in New York. (As this issue went to press, the results of the conference were not known.)

Although the demonstration last week resulted in the tie-up of 1,100 trucks, and halted all freight deliveries and pickups in the metropolitan area, the walk-out did not affect truck drivers, members of the teamsters' union, who reported for work

as usual.

Grievances included the union's peeve at the February 27 embargo on intercity shipments, which Alfred J. Mazanec, union spokesman, said had cost the jobs of some 400 express employees, with threats to still others. "They want all the gravy," he is reported to have declared, and "we will not be pushed around forever." A further complaint of the union concerned part-time workers, hired on a straight-time-pay basis. It was the union's contention that such work should go to regular employees on a time-and-one-half basis. A general strike has been threatened if no settlement is reached.

R. I. Gets St. Louis-Kansas City Truck Certificate

The Interstate Commerce Commission has granted to the Rock Island Motor Transit Company, subsidiary of the Chicago, Rock Island & Pacific, a certificate authorizing common-carrier trucking operations between St. Louis, Mo., and Kansas City, serving points which are stations on the line of the parent railroad. Transit had sought unrestricted rights, but the commission imposed the usual conditions designed to insure that the highway services shall remain auxiliary to rail service.

The decision in No. MC-29130 (Sub-No.

The decision in No. MC-29130 (Sub-No. 34) represents the view of Commissioners Lee and Patterson. Chairman Rogers, dissenting, would have denied the application as recommended by the Joint Board

which heard the case.

Supply Trade

Goodall-Sanford, Inc., has leased the building at 523 Madison Avenue, New York, for its new selling division, Goodall Fabrics, Inc.

The Standard Stoker Company has been awarded a renewal of its Army-Navy "E" for continued meritorious production achievement.

Thomas J. Henkle, who served for 10 years as western sales manager of the Edward G. Budd Manufacturing Company, with headquarters at Chicago, and is considered one of the pioneers in streamlined train development, has retired after 27 years of service with the Budd organization. At the time of his retirement Mr. Henkle was a special representative at Chicago.

William A. Maxwell, general sales manager of the P. & M. Company since 1931, has been appointed Chicago district sales manager of the Ramapo Ajax division of the American Brake Shoe Company.



William A. Maxwell

Mr. Maxwell attended Nebraska University. Except for a period of service in the Navy during the last war, he had been associated with the P. & M. Company since 1917.

Rudolph Leppla, formerly mechanical engineer for the Bettendorf Company, has been appointed chief engineer of the Mc-Conway & Torley Corp., of Pittsburgh, Pa.

R. E. Broyles has been appointed commercial manager in charge of a new branch office and warehouse opened by the Graybar Electric Company in Corpus Christi, Tex. Mr. Broyles had been resident salesman in the area.

T. B. Clement has been elected executive vice-president; M. L. Gray, vice-president and export manager; and R. H. Wood, general manager, of the Union Switch & Signal Co. The three officers will make their headquarters at the company's offices in Swissvale, Pa. Mr. Clement was graduated from Trinity Col-

lege, Hartford, Conn., in 1917. He joined the Army in July of that year as a second lieutenant and subsequently rose to the rank of captain while serving in France. After the war, he was employed as assistant to the operations manager of the International Mercantile Marine Company. He was transferred to the passenger department in 1921 and appointed manager in 1926. He was appointed general traffic manager of Transcontinental Air Transport, Inc., in 1928, and with the formation of the Transcontinental & Western Air Lines in 1930, he was appointed a vice-



T. B. Clement

president. He resigned this position in October, 1933, and subsequently was engaged in private business in Philadelphia, Pa., until February, 1939, when he joined the Union Swith & Signal Co. as assistant to the president. He was elected a vice-president in 1942.

Mr. Gray was graduated from Pennsylvania State College. He joined the Union Switch & Signal Co. as an inspector in January, 1905, later being transferred to the sales department. He was appointed



M. L. Gray

assistant to the general sales manager in 1916 and later assistant to the vice-president and general sales manager. He was elected acting vice-president in 1929, and vice-president in April, 1936.

Mr. Wood was graduated with a degree in electrical engineering from Ohio State University, and later from the Duquesne University Law School. He joined the engineering department of the Union Switch & Signal Co. in July, 1922, and later that year was transferred to the com-



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pany's patent department. He was appointed patent attorney in 1936, assistant to the general manager in 1943, and assistant general manager in 1944.

George W. Baughman, assistant chief engineer in charge of electronics, has been appointed chief engineer of the Union Switch & Signal Co. Mr. Baughman was graduated from Ohio State University with a degree in electrical engineering in 1920 and was awarded the professional electrical engineering degree in 1924. From



George W. Baughman

1920 to 1923, he was employed in the development laboratories of the Bell Telephone System. He began work with the Union Switch & Signal Co. in 1923 and from then until July, 1944, he was engaged chiefly in field development work associated with railway signaling and braking. He was appointed assistant chief engineer in charge of electronics in July, 1944.

Myron E. Capouch has been appointed assistant manager of the wire rope and construction materials division of the American Steel & Wire Co., a United States Steel subsidiary, to succeed B. S. Pease, who has retired. Mr. Capouch was assistant manager of the company's electrical and wire rope department in Chicago.

Robert B. Zane has been appointed ned the Union district engineer of the Chicago sales office 22, and of the Okonite Company. Mr. Zane was graduated from Illinois University with a degree in electrical engineering in 1932. He joined the Okonite Company as a research engineer in the Passaic, N. J., laboratories. Three years later he was transferred to sales engineering in the company's Chicago office, and in 1943, returned to the factory to participate in development work on high frequency and radar cables for the Army and Navy.

Robert E. Cramer, engineer of appropriations and properties, has been appointed chief engineer of the American Steel & Wire Co., a United States Steel subsidiary, to succeed E. J. Reardon, who recently resigned.

Tracy V. Buckwalter has retired as chief engineer and vice-president of the Timken Roller Bearing Company, but will continue in a consulting capacity. Mr. Buckwalter joined the Timken Company in 1916 as chief engineer after 16 years in the Altoona, Pa., shops of the Pennsylvania, where he developed the motor baggage truck bearing his name. He was elected vice-president of Timken in 1925 and thereafter devoted a large part of his time to the company's railroad activities. He

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Tracy V. Buckwalter

developed the application of Timken bearings to passenger and freight car journals and for passenger and freight locomotives. Under his direction, the company built a high-speed passenger and freight locomotive equipped with Timken bearings. This locomotive was loaned to many of the railroads and as a result of the experience thereby obtained, anti-friction bearings have been applied to most of the locomotives built in the past seven years. Mr. Buckwalter is the author of the following publications: "Roller-Bearing Service in Locomotive, Passenger and Freight Equipment"; "Locomotive Axle Testing"; "Investigation of Fatigue Strength of Axles, Press-Fits, Surface Rolling and Effect of Size"; "Stress Analysis of Locomotive and Other Large Axles"; "Locomotive Axle and Wheel Research"; and "Steam Locomotive Slipping Tests."

David Greene, assistant vice-president, has been elected vice-president of the

Magor Car Corporation, with headquarters as heretofore in New York. W. P. Smith has been elected vice-president of the Magor Car Export Corporation, also with headquarters in New York.

OBITUARY

Charles A. Beaumont, western railroad representative of the Wilson-Imperial Company, died March 25.

William H. Workman, sales engineer in the Chicago office of the General Railway Signal Company, died in the Illinois Masonic Hospital, Chicago, on April 16, 1945, after a short illness. Mr. Workman was born at Gouldsboro, Me., on June 18, 1883. He was educated in the Sullivan Grammar School and the West Sullivan High School, graduating in 1900. His first position was with the Chicago & North Western in the signal department, from March, 1900, to June, 1907, serving in various capacities up to general foreman. He left the C. & N. W. in June, 1907, to go with the Pennsylvania as signal maintenance foreman. From May 11, 1910, until June 15, 1910, he was employed by the General Railway Signal Company in the Chicago Terminal of the C. & N. W. In June, 1910, he reported to the Rochester office of the General Railway Signal Company to assist in the estimating, circuit and locking work in the commercial department, eventually being placed in charge of this work. While in that capacity, he handled the circuit work on the original New York municipal subway signaling contract. Mr. Workman was transferred to the Chicago office of the signal company on October 15, 1917; where he was located at the time of his death.

Equipment and Supplies

LOCOMOTIVES

The NEW YORK CENTRAL has ordered five 1,000-hp. Diesel-electric switching locomotives from the Electro-Motive division of the General Motors Corporation, in place of five 600-hp. Diesel locomotives originally ordered in 1942, which have been cancelled.

PASSENGER CARS

48 Passenger Cars Bought

The Seaboard Air Line, the Pennsylvania and the Richmond, Fredericksburg & Potomac have placed an order for 48 stainless-steel passenger cars with the Edward G. Budd Manufacturing Company. The cars, which will cost approximately \$4,500,000, will supplement the passenger-car equipment in the New York-Florida service. Thirty of the cars are for the Seaboard; ten for the Pennsylvania, and eight for the Richmond, Fredericksburg & Potomac.

The Seaboard, whose lines extend to Miami, Venice and St. Petersburg, in southern Florida, and westward to Birmingham, Ala., serves directly or indirectly substantially all of the military installations in the southeast. In addition to civilians engaged in essential war activities, upward of 50 per cent of the travel on its trains is reported to consist of men and women in uniform. Travel over this route has been exceedingly heavy during the war years, not only by men and women in the services, but also by relatives who visit the military posts and delivery of the new cars is expected to materially ease these crowded conditions.

The request for bids on the 48 cars was reported in the Railway Age of March 10.

The CHESAPEAKE & OHIO has introduced twin two-unit air-conditioned combination diner and kitchen-pantry-dormitory cars on the Cincinnati-Virginia section of the 'George Washington," eastbound, and on the westbound section of the "Fast Flying Virginian." The equipment was constructed in the railroad's Richmond, Va., shops. The dining sections were built from 79 ft. 31/2 in. coaches and the kitchen-dormitory units from 76 ft. 101/2 in. coach-baggage cars. Each of the companion units has a modern stainless steel pantry and kitchen; two staterooms accommodating a crew of four cooks and eight waiters, and a double bedroom for the use of two stewards. This arrangement for "sleeping" the dining car crews makes possible the synchronization of the dining car schedules of the George Washington and the westbound Virginia section of the Fast Flying Virginian. The latter train picks up its unit at Clifton Forge at 4:40 a.m., taking it to Cincinnati where it is cleaned, inspected and provisioned for the eastbound run of the George Washington. Ordinarily the layover and dispersal of dining car crews at stop-over towns would preclude this coordinate use of the dining car facilities.

SIGNALING

The Boston & Maine has placed an order with the Union Switch & Signal Company for the required materials involved in the remodeling and rearranging of the track layout of an existing electropneumatic interlocking at Ayer, Mass., and the installation of a new code remote control interlocking at Willows to be operated from the Ayer tower. The order calls for A-5 switch movements with Style C cut-off valves at Ayer, M-22A electric switch movements at Willows, together with new H-2 searchlight signals, relays and housings. The field installation work is to be carried out by the railroad company's forces.

The Seaboard Air Line has placed an order with the Union Switch & Signal Co. for material to fill in and complete the centralized traffic control system between Richmond, Va., and Raleigh, N. C. This covers the 18 miles of single track between Manson and Kittrell, which, when installed, will provide complete C. T. C. signaling for 160 miles of territory. The order includes the necessary control machine parts and code equipment for expanding the existing system to handle the

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new territory from Raleigh. The order also includes the required Style R-2 color-light high signals, Style N-2 dwarf signals, Style M-22A electric switch layouts, and electric switch locks, relays, rectifiers, transformers, housings, etc. The railway will install the signaling with regular forces.

The Western Maryland has placed an order with the Union Switch & Signal Company for the materials to install an electro-pneumatic interlocking at Big Pool Jct., Md. The order includes a 6-lever Style T. C. interlocking machine, Style A-21 electro-pneumatic switch and lock layouts, with Style CP cut-off valves, Style R-2 color-light high and Style N-2 dwarf signals, rectifiers, relays and housings. The installation will be made by railway forces.

The WABASH has placed an order with the Union Switch & Signal Company for the signal material required for an installation of manual block remote control signaling between Springfield, Ill., and Jacksonville, involving 31 miles of single track. A new section will be added to the present Decatur-Starnes Style C control machine to handle the enlarged territory from the control point at Decatur. The order includes, besides the control machine, the necessary office and field coding units, Style H-2 searchlight high and dwarf signals, coded track circuit equipment for installation between sidings, switch circuit controllers, relays, rectifiers, transformers and housings. The installation work will be handled by railroad forces.

Construction

Pennsylvania.—This road has started construction of a third track between Bucyrus, Ohio, and Crestline, together with extensive signaling and other improvements, all of which will be completed at a cost of \$1,250,000. Included in the work is the installation of an enlarged power interlocker in a new fireproof building at Crestline to replace present equipment and to control present main track switches East and West of the Crestline passenger station, the new double signaling on the middle track, and all switches from the West end of the Crestline yard to Bucyrus.

READING.—This railroad has awarded a contract for the furnishing and erection of the steel superstructure of two bridges, one south of Conestoga, Pa., and the other south of Guyencourt, Del., at estimated cost of \$27,360, to the American Bridge Company, Philadelphia, Pa.

VIRGINIAN.—This railroad is reported to have authorized construction of a turntable at Norfolk, Va., at estimated cost of \$200,000.

WAR DEPARTMENT.—The U. S. Engineers office at Savannah, Ga., has awarded a contract, amounting to \$20,513, to the V. P. Loftis Company, Charlotte, N. C., for the construction of a railroad storage yard in South Carolina.

Financial

BALTIMORE & OHIO .- Annual Report .-The B. & O. in 1944 received the largest business in its history, with freight revenues totaling \$315,418,567 and passenger revenues \$51,308,473, increases respectively of 5.3 and 29.1 per cent over 1943. Due to the heavier business and increased wage rates and costs of materials and supplies, operating expenses also increased substantially, amounting to \$36,484,401, or 14.6 per cent more than in 1943. Tax accruals reached an all-time high of \$48,984,845, which was \$2,227,636 above the 1943 figure. Of the total, \$10,588,962 were taxes on wages for retirement and unemployment benefits. Net income amounted to \$20,-914,438, which was \$9,595,042 less than in 1943.

During the past year, additions to the road's line were made to develop important coal fields in West Virginia and improvements made to 65 bridges to permit more efficient and economical operation on 264 miles of road. New equipment placed in service comprised 44 locomotives, 1,250 hopper cars, and 64 other units. Delivery on 44 new locomotives, 1,200 steel box cars and 1,000 steel hopper cars is expected during 1945.

In the annual report, R. B. White, president, pointed to the improvement made in the company's financial structure since the 1938 modification plan was put into effect. Outstanding debt, other than equipment trusts, has been reduced \$105,674,469, and annual interest charges cut \$5,085,375. He reported also that since the war began hundreds of millions of dollars have been invested in new plants along the B. & O. line, and expressed the belief that the greater part of this capacity would be reconverted into post-war production.

Baltimore & Ohio. — Detroit-Toledo Trackage Rights.—This company, in a supplemental application to the Interstate Commerce Commission, has in effect replied to the views of the Pere Marquette (noted in Railway Age of April 21, page 736) with respect to its proposal to operate under trackage rights over the New York Central from Toledo, Ohio, to Detroit, Mich., after the expiration on June 7 of a joint arrangement with the Pere Marquette under which its trains between those points have used the latter road's line, being operated with Pere Marquette power and crews.

The Baltimore & Ohio accepts the Pere Marquette statement that the latter's line is, except for certain wye tracks, a doubletrack line; it agrees that the Pennsylvania and Wabash use the Fort Street station at Detroit, but points out that those roads are not feeder lines to the B. & O. to the extent that it expects the New York Central and Canadian Pacific to be; and it asserts that the Pere Marquette did not accurately describe the operation of a northbound mail and express train 6 days per week between the two cities, as this train, it says, is not a part of the service performed under the joint agreement which terminates June 7. The principal contention of the Pere Marquette, however, was that certain of its employees would be affected by the proposal, and that the B. & O. should enter into an arrangement to satisfy their claims. This, the B. & O. replies, is entirely a matter between the Pere Marquette and its employees, and it admits no responsibility in meeting any claims they may make.

CANADIAN NATIONAL.—Annual Report.

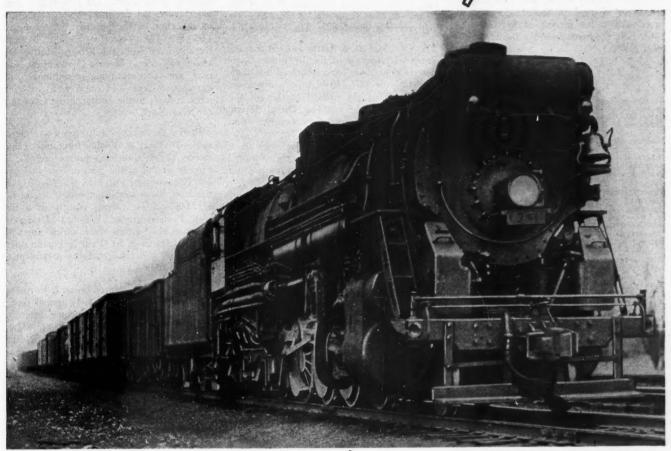
—The 1944 annual report of this road shows a net income, after interest and other charges of \$23,026,924, as compared with a net income of \$35,639,412 in 1943. Selected items from the income statement follow:

	1944	Decrease Compared With 1943
Average Mileage Operated RAILWAY OPERATING	23,496.03	+1.72
Revenues	\$441,147,510	+\$531,555
Maintenance of way and structures Maintenance and depreciation of	76,503,926	+9,195,497
equipment	80,215,293 177,889,699	+7,848,762
Transportation Total Operating Expenses Operating ratio	362,547,044 82.18	+18,412,251 +38,071,374 +8.54
NET REVENUES FROM OPERATIONS Railway tax accruals	78,600,467 7,341,514	-37,539,818 -1,049,164
Equipment rents— Net Dr. Joint facility rents— Net Dr.	2,956,314 577,995	-3,532,425 +20,065
NET RAILWAY OPERATING INCOME Other income	67,724,644 10,522,183	-13,909,294 -607,619
TOTAL INCOME	78,246,827	-13,301,675
Rent for leased roads and equipment	1,163,904	-917,390
TOTAL DEDUCTIONS FROM GROSS INCOME	7,150,262	+904,217
INCOME AVAILABLE FOR PAYMENT OF INTEREST		-14,205,893
Interest on funded deb —public Interest on govern-	28,135,938	-2,862,258
ment loans	19,933,702	+1,268,854
NET INCOME	23,026,924	-12,612,488

CHATTAHOOCHEE VALLEY.—Promissory Note.—Division 4 of the Interstate Commerce Commission has authorized this road to issue a \$100,000 promissory note, bearing interest at 2½ per cent, to evidence a loan of that amount from the Trust Company of Georgia, Atlanta, Ga., the proceeds of which are to be applied, with other funds, to the retirement of a \$120,000 note outstanding.

CHICAGO & NORTH WESTERN.-Retires R. F. C. Debt.-The Reconstruction Finance Corporation has announced that this road has exercised its option to retire \$6,-224,000 of its 15-year collateral notes held by the R. F. C., this being the remaining portion of \$24,855,000 of such securities which the federal agency received in the settlement of claims at the time the road's reorganization was consummated. The company called \$18,631,000 of the notes in December, 1944. The issue was redeemed at 100.9, representing a premium to the R. F. C. of \$223,695. Altogether, that agency had advanced \$46,588,133 to the road, and in addition had bought \$1,360,-000 of its securities from the Public Works Administration. All has been repaid.

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Today, the railroads are performing transportation miracles with inadequate equipment. Tomorrow, peacetime industry will require still more exacting performance.

To meet such demands, Lima Super-Power steam locomotives are designed to haul heavier trains at higher speeds on longer runs.



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CHICAGO, ROCK ISLAND & PACIFIC-COLORADO & SOUTHERN.—Lease of Burlington-Rock Island.—Upon petition of the Beaumont, Sour Lake & Western (a subsidiary of the Missouri Pacific) for reconsideration of the order of Division 4 of the Interstate Commerce Commission approving the joint lease of the Burlington-Rock Island line from Teague, Tex., to Galveston to the Colorado & Southern and Chicago, Rock Island & Gulf, Commissioner Porter has extended for two months to May 21 the effective date of the order. (Previous item in Railway Age of March 31, page 608.)

DULUTH, MISSABE & IRON RANGE.—Annual Report.—The 1944 annual report of this road shows a net income, after interest and other charges of \$8,329,545, as compared with a net income of \$8,652,841 in 1943. Selected items from the income statement follow:

	Increase
1944	Decrease Compared With 1943
1,196.29	
\$40,600,071	-\$1,185,388
4,706,065	+191,739
6,545,189 8,187,583	+308,206 -45,424
20,089,076 49.78	+451,838 +1.80
20,510,996 2,890,779	-1,637,225 -41,830
246,280 36,438	-70,375 +5,105
9,458,181 21,079	-484,672 -62,797
9,479,261	-547,468
279 ot 864,638	-29 -50,550
1,004,612	+66,720
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	1,196.29 \$40,600,071 4,706,065 6,545,189 8,187,583 20,089,076 49.78 20,510,996 2,890,779 246,280 36,438 9,458,181 21,079 9,479,261 ot 279 ot 864,638 1,004,612

^{*} Exclusive of loss on retirement or sale of tracks, etc., amounting to \$122,733.
† Exclusive of federal income and excess profits taxes.

FLORIDA EAST COAST.—Annual Report.—The 1944 annual report of this road shows a net income, after interest and other charges, of \$1,633,487, as compared with a net income of \$4,954,411 in 1943. Selected items from the income statement follow:

items from the me	onic, statement	TOHOW .
	1944	Increase or Decrease Compared With 1943
Average Mileage		1100
Operated RAILWAY OPERATING	. 682	
REVENUES	\$31,730,202	-\$828,883
Maintenance of way and structures Maintenance of	4,123,318	+898,857
equipment	3,565,496	+497,914
Transportation— rail line	9,248,079	+876,531
TOTAL OPERATING EXPENSES	19,055,811	12 450 020
Operating ratio	60.1	+2,450,938 +9.1
NET REVENUE FROM		
OPERATIONS .	12,674,392	-3,279,821
Railway tax accruals	5,666,886	+1,173,328

RAILWAY OPERATING INCOME Hire of equipment— Net Dr.	7,007,505 969,919	-4,453,149 -233,427
Joint facility rents— Net Dr.	85,987	+2,157
NET RAILWAY OPER- ATING INCOME Other income	5,951,599 194,843	-4,221,880 +28,372
GROSS INCOME	6,146,442	-4,193,508
Interest on funded debt	2,819,799	-6,470
TOTAL DEDUCTIONS FROM GROSS INCOME	4,512,955	-872,585
NET INCOME	1,633,487	-3,320,924
THE REAL PROPERTY OF THE PERSON NAMED IN COLUMN TWO IN COL		

GULF, MOBILE & OHIO.—New Director Elected.—George Pecaro, an executive of the Flintkote Company, was elected a member of the board of directors of the Gulf, Mobile & Ohio, at a stockholders meeting held recently in Mobile, Ala.

GULF, MOBILE & OHIO. — Promissory Notes.—Division 4 of the Interstate Commerce Commission has authorized this company to issue \$376,740 of promissory notes in evidence of the unpaid portion of the purchase price of 5 1,000-hp. Diesel-electric road switching locomotives ordered from the American Locomotive Company. The notes and contract have been sold on a 1.65 per cent interest basis to the National Commercial Bank & Trust Company of Albany, N. Y.

GULF, MOBILE & OHIO .- To Acquire Alton.-An agreement whereby the Gulf, Mobile & Ohio would acquire the properties of the bankrupt Alton was reached on April 24, according to an announcement by I. B. Tigrett, president of the Gulf, Mobile & Ohio. Under the agreement, owners of \$45,350,000 of outstanding Chicago & Alton 3 per cent bonds, sole funded debt of that railroad, will receive \$22,675,-000 of new 4 per cent income bonds and 328,7871/2 common shares of the G. M. & O., equivalent to \$500 of income bonds and 71/4 common shares per \$1,000 Chicago & Alton bond. The income bonds are to be dated January 1, 1945, and mature January 1, 2044. In all other respects they will be identical with the outstanding \$6,025,800 of G. M. & O. 5 per cent general mortgage income bonds due 2015. The agreement is subject to approval of the Chicago & Alton bondholders, the United States district court, the Interstate Commerce Commission, various state regulatory bodies, and the directors and stockholders of the G. M. & O.

MINNEAPOLIS, ST. PAUL & SAULT STE.
MARIE. — Reorganization Ends. — Federal
Judge Gunnar H. Nordbye, Minneapolis,
Minn., last week signed a decree terminating reorganization of the Minneapolis, St.
Paul & Sault Ste. Marie and discharging
trustees and managers. The men discharged as trustees are G. W. Webster
and Joseph Chapman, and those discharged
as reorganization managers are Kenneth
F. Burgess, Fred N. Oliver and Henry S.
Mitchell.

PENNSYLVANIA. — Refinancing. — This company has applied to the Interstate Commerce Commission for authority to issue \$57,130,000 of series G general mortgage bonds, due in 1985, the interest rate to be determined by competitive bidding on \$52,-

981,000 to be sold publicly. In addition, \$304,000 will be sold to the Pennsylvania Employees Relief Fund and \$1,788,000 to various companies in the Pennsylvania system. The proceeds of the sale of this \$55,073,000 of new securities are to be applied, with other funds, to the redemption of \$57,730,000 of series C 334 per cent general mortgage bonds due in 1970. In addition, \$1,394,000 of the series G bonds will be held in the road's insurance and bridge renewal funds and \$663,000 in the company treasury.

MINNEAPOLIS & St. Louis.—Promissory Note.—Division 4 of the Interstate Commerce Commission has authorized this company to issue a \$607,233 promissory note in evidence, but not in payment, of the unpaid portion of the purchase price of two 4,050-hp. Diesel-electric freight locomotives ordered from the Electro-Motive Division of General Motors Corporation. The note and accompanying conditional sale agreement were sold on a 1.65 per cent interest basis to the Irving Trust Company of New York.

PORT TOWNSEND SOUTHERN—Oumership.—Division 4 of the Interstate Commerce Commission has authorized R. S. Fox, president of the Seattle Export Lumber Company, to purchase the property of the Port Townsend Southern Railroad for \$115,000. This consists mainly of a line from Port Townsend, Wash., to Discovery Junction, 12.3 miles, over which the Chicago, Milwaukee, St. Paul & Pacific operates under a trackage rights arrangement to be continued.

RICHMOND, FREDERICKSBURG & POTOMAC.

—Annual Report.—The 1944 annual report of this road shows a net income, after interest and other charges, of \$4,815,431 as compared with \$5,307,285 in 1943. Selected items from the income statement follow:

		Increase
	1944	Decrease Compared With 1943
Average Mileage Operated RAILWAY OPERATING	470.35	+6.61
REVENUES	\$38,371,715	+\$964,179
Maintenance of way and structures Maintenance of	2,528,578	+282,568
equipment Transportation	4,394,561 9,644,849	+1,073,127 +593,722
TOTAL OPERATING EXPENSES Operating ratio	18,178,874 83.04	+2,204,853 +2.06
NET REVENUE FROM OPERATIONS Railway tax accruals	20,192,841 13,685,950	-1,240,674 -633,963
RAILWAY OPERATING INCOME Hire of equipment—	6,506,891	-606,711
Net Dr. Joint facility rents—	1,841,006	-16,87 2
Net Dr.	27,479	-24,39 2
NET RAILWAY OPERATING INCOME Non-operating income	4,638,406 378,737	-565,448 +29,230
GROSS INCOME	5,017,143	-536,218
Interest on funded deb	188,175	-43,800
TOTAL DEDUCTIONS FROM GROSS INCOME	201,712	-44,365
NET INCOME	4,815,431	-491,854

St. Louis-San Francisco.—Reorganization.—Director Sweet of the Bureau of

The Outstanding Development Development Design in Locomotive Design

The Franklin System of Steam Distribution has eliminated the restriction on power output imposed by conventional systems of steam distribution.



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Finance of the Interstate Commerce Commission has advised parties involved in this road's reorganization that, following court approval of the commission's plan of reorganization, the bureau was recommending to Division 4 that four classes of creditors be allowed to vote for adoption or rejection of the plan. The securities concerned are the Kansas City, Fort Scott & Memphis 4 per cent refunding mortgage; the series A and B prior lien bonds; the series A and B consolidated mortgage bonds; and the collaterally secured notes.

READING .- Refinancing .- Division 4 of the Interstate Commerce Commission has authorized this company to issue \$84,000,-000 of series D 31/8 per cent first and refunding mortgage bonds, sold at 100.59 to Halsey, Stuart & Company and others. (Details of the transaction were set forth in an article in Railway Age of April 21, page 704.) A net interest saving of \$47,-652,396 is expected to result from the exchange of the new bonds for outstanding issues carrying higher rates.

St. Louis Southwestern .- Annual Report.—The 1944 annual report of this road shows a net income of \$8,119,085 as compared with a net income of \$7,543,273 in 1943. Selected items from the income statement follow:

		Increase
41	1944	Decrease Compared With 1943
Average Mileage Operated RAILWAY OPERATING	1,606.63	-5.25
REVENUES	\$72,586,941	+\$8,208,027
Maintenance of way and structures Maintenance of	7,395,337	+2,128,692
equipment Transportation	6,757,350 16,226,043	+399,795 +705,526
TOTAL OPERATING EXPENSES Operating ratio *	33,222,783 45.77	+3,327,219 -0.67
NET REVENUE FROM OPERATIONS • Railway tax accruals	39,364,158 25,132,881	+4,880,808 +5,131,058
RAILWAY OPERATING INCOME Net rents-Dr.	14,231,276 3,424,156	-250,249 -380,221
NET RAILWAY OPER- ATING INCOME Total other income	10,807,120 379,517	+129,972 +111,887
GROSS INCOME	11,186,637	+241,859
Rent for leased roads and equipment	13,572	+61
TOTAL DEDUCTIONS FROGROSS INCOME NET INCOME	3,014,523 8,119,085	-4,751 +575,812
Disposition of net inco Miscellaneous appropri tions of income		+472,576
BALANCE OF INCOME TRANSFERRED TO EARN SURPLUS	5,817,031	+103,236

Toledo, Peoria & Western.—Annual Report.-The 1944 annual report of this road shows a net income, after interest and other charges, of \$2,353,126, as compared with a net income of \$2,292,452 in 1943. Selected items from the income statement follow:

		Increase or Decrease Compared
	1944	With 1943
Average Mileage Operated RAILWAY OPERATING	239.24	
RAILWAY OPERATING REVENUES	\$5,233,265	+\$414,095

Maintenance of way and structures Maintenance of	487,816	+24,781
equipment Transportation—rail line	262,669 1,075,257	+30,062 +122,959
TOTAL OPERATING EXPENSES Operating ratio	2,274,743 43.8	+166,008
NET REVENUE FROM OPERATIONS Railway tax accruals	2,958,523 296,939	+248,088 +140,226
RAILWAY OPERATING INCOME Net rents—Dr.	2,661,583 258,490	+107,862 +47,913
NET RAILWAY OPER- ATING INCOME Total other income	2,403,093 17,354	+59,948 +1,552
TOTAL INCOME	2,420,447	+61,501
Interest on funded debt	63,017	+777
TOTAL FIXED CHARGES	64,229	-1,259
BALANCE OF INCOME TRANSFERRED TO EARNED SURPLUS	2,353,126	+60,674

VIRGINIAN.—Awards New Bonds.—On April 24, the Virginian awarded its \$60,-000,000 issue of new first lien and refunding mortgage 3 per cent bonds, due 1995, to a banking group headed by the Mellon Securities Corporation and Halsey, Stuart & Co., on a bid of 105.669. The bonds were reoffered at 106.71, to yield approximately 2.75 per cent. Proceeds from the sale, together with a bank loan of not more than \$3,000,000 and treasury funds, will be applied to the redemption at 106 of \$60,-044,000 of outstanding series A 334 per cent first and refunding mortgage bonds due in 1966.

VIRGINIAN.—Annual Report.—The 1944 annual report of this road shows a net income, after interest and other charges, of \$4,955,726, as compared with a net income of \$5,304,306 in 1943. Selected items from the income statement follow:

		Increase
		Decrease
		Compared
	1944	With 1943
Average Mileage Operated RAILWAY OPERATING	657.45	05
REVENUES	\$29,169,161	+\$1,868,297
Maintenance of way	-	
and structures	3,159,880	+425,307
Maintenance of equipment	6,925,108	+988,091
Transportation	6,171,969	+1,031,160
TOTAL OPERATING		
EXPENSES	17,234,294	+2,494,300
Operating ratio	21.16	+2.33
NET REVENUE FROM		
OPERATIONS	11,934,867	-626,003
Railway tax accruals	6,109,000	-291,000
RAILWAY OPERATING		
INCOME .	5,825,867	-335,003
Equipment rents-Net	1,236,079	-34,591
Joint facility rents-Ne	t 56,471	+789
NET RAILWAY OPER-		
ATING INCOME	7,118,417	-368,806
Other income	110,702	+30,444
TOTAL INCOME	7,229,119	-338,362
Interest on funded deb	2,251,650	
TOTAL FIXED CHARGES	2,251,992	-264
NET INCOME TRANSFER	RED	****
TO EARNED SURPLUS	4,965,726	-338,581

WHEELING & LAKE ERIE. - Trackage Rights.-This road has asked the Interstate Commerce Commission for a further hearing in its Finance Docket 14531 proceeding, in which Division 4, as noted in Railway Age of February 24, page 403, denied its application for authority to operate under trackage rights from Steubenville, Ohio, to Follansbee (East Steubenville), W. Va., 1.97 miles, over a line of the Wheeling Steel Corporation which includes a bridge crossing the Ohio river. division's adverse decision, said the Wheeling, was based to a large extent, apparently, on the agreement it had made to pay the steel company 78.15 cents per car for the use of its facilities; in effect it held this to be granting unlawful concessions to the steel company. To meet this objection, said the Wheeling, on April 17 it made a new arrangement with the steel company, under which it would use the facilities involved without any compensation to the steel company, the result of which would be to put the Wheeling and the Pennsylvania, the other road serving the plant, on a basis of substantial parity. The further hearing was asked, it said, in order to bring this new agreement, and the reasons for it, before the commission.

Average Prices Stocks and Bonds

April 24	Last	Last
Average price of 20 representative railway stocks 54.17	52.60	38.66
Average price of 20 representative railway bonds 97.86	96.92	86.94

Dividends Declared

Akron, Canton & Youngstown.—5% preferred, \$5.00, accum, payable May 1 to holders of record April 20.

Atlantic Coast Line. — Common (increased), \$1.75, payable June 13 to holders of record May 18; 5% preferred, \$2.50, semi-annually, payable May 10 to holders of record April 23.

Louisville & Nashville.—New (initial), 88¢, payable June 13 to holders of record May 1.

Passaic & Delaware Extension. — Guaranteed, \$2.00, semi-annually, payable May 1 to holders of record April 23.

United New Jersey RR. & Canal.—\$2.50, quarterly, payable July 10 to holders of record June 20.

United New Jersey RR. & Canal.—\$2.50, quarterly, payable July 10 to holders of record June 20.

Abandonments

ATLANTIC COAST LINE.—Division 4 of the Interstate Commerce Commission has authorized this company to abandon a branch from Micanopy Junction, Fla., to Micanopy, 3.4 miles, reserving jurisdiction for a period of 2 years for the protection of any employees adversely affected.

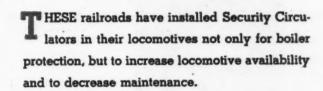
LEHIGH VALLEY.-Division 4 of the Interstate Commerce Commission has authorized this company and the Lehigh Valley of New Jersey, lessor, to abandon operation of, and to abandon, respectively, a 0.67-mile branch in the vicinity of Rahway Junction, N. J.

TUCKASEEGEE & SOUTHEASTERN.—This road has asked the Interstate Commerce Commission for authority to abandon its entire line from Sylva, N. C., to East La Porte, 12.2 miles.

RISE IN EXPRESS TRAFFIC .- Despite 2 loss of 22,000 of its experienced employees to the armed services, equipment shortages and a "flood of traffic diverted from other channels," the Railway Express Agency in 1944 handled 200,289,443 shipments, or 21,-081,083 more than in 1943, L. O. Head, president, recently announced. Gross revenues, he said, had increased 14.74 per cent.



SECURITY CIRCULATORS



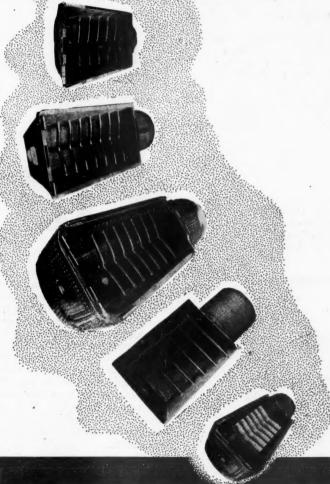
Security Circulators give these results -

By assuring a positive flow of water over the center of the crown sheet at all times,

By forming an ideal support for arch brick, permitting the use of a 100% arch and promoting better combustion,

By reducing honeycombing, flue plugging and cinder cutting, and by increasing the life of arch brick.

During the last eleven years over fifty-three hundred Security Circulators have been ordered by these railroads.



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Railway Officers

EXECUTIVE

Culver White, assistant to the president of the Gulf, Mobile & Ohio at Jackson, Tenn., has been elected vice-president, with the same headquarters. Mr. White is also a director of the road.

John E. Tilford, assistant vice-president, traffic, of the Louisville & Nashville, has been elected vice-president, traffic, with headquarters as before at Louisville, Ky., succeeding Addison R. Smith, who has retired after 56 years of service.

R. W. Barnes, whose promotion to vice-president of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., was reported in the Railway Age of April 14, was born at Edgewater, Colo., in 1887, and is a graduate of the University of Colorado. He entered



R. W. Barnes

railway service in 1912 as a draftsman and assistant engineer of the S. P., at Portland, Ore. In 1921 Mr. Barnes was promoted to construction engineer of the Texas & New Orleans (now a part of the Southern Pacific System), and five years later he was advanced to chief engineer of the Southern Pacific Lines in Texas and Louisiana, the position he held at the time of his new appointment.

Edward R. Bardgett, vice-president, traffic, of the Western Maryland at Baltimore, Md., will retire from active service on May 1. Mr. Bardgett, who was born at Fort Erie, Ont., on August 17, 1875, entered railroading in 1895 in the traffic department of the Lehigh Valley. He served as general eastern agent of the Chicago & Alton from 1917 to 1918, when he became port agent of the Ore & Coal Exchange at Toledo, Ohio. The following year he joined the Cunard Steamship Co. as general freight agent at New York, remaining in that post until 1930, when he was appointed general traffic manager of the Western Maryland. Mr. Bardgett has been serving as vice-president, traffic, since his election to that position in 1933.

FINANCIAL, LEGAL AND ACCOUNTING

L. D. Brown has been appointed assistant general auditor of the Union Pacific, with headquarters at Omaha, Neb.

D. S. Wright, general solicitor of the Gulf, Mobile & Ohio at Mobile, Ala., has been promoted to assistant general counsel, with the same headquarters.

William F. Kennedy, assistant comptroller of the Louisville & Nashville at Louisville, Ky., has been promoted to comptroller, with the same headquarters, succeeding A. J. Pharr, who has retired after 44 years of service. R. J. Wagner, tax commissioner and assistant to the comptroller, has been advanced to assistant comptroller, retaining the title of tax commissioner. E. D. Metten, chief clerk to the assistant comptroller, has been promoted to auditor of capital expenditures at Louisville, and H. W. Davis, special traveling auditor, has been advanced to general statistician, with headquarters as before at Louisville.

OPERATING

J. C. Grisinger, Jr., trainmaster of the Chicago, Burlington & Quincy at Galesburg, Ill., has been promoted to assistant superintendent of the Omaha division, with headquarters at Omaha, Neb.

W. A. J. Carter has been appointed acting superintendent of the Northern division of the Gulf, Colorado & Santa Fe, with headquarters at Ft. Worth, Tex., succeeding to the duties of H. C. Willis, who has been granted a leave of absence due to illness.

Roland de Waal, whose promotion to superintendent of the Dallas and Austin divisions of the Southern Pacific, with headquarters at Ennis, Tex., was reported in the Railway Age of April 14, was born at San Antonio, Tex., on March 22, 1894,



Roland de Waal

and entered railway service in December, 1912, as a locomotive fireman of the S. P., at San Antonio. On October 3, 1924, he was advanced to engineman, and in February, 1931, he was promoted to traveling engineer, with headquarters at San Antonio. One year later Mr. de Waal was

transferred to Houston, Tex., and in 1935 he became general road foreman of engines. In November, 1940, he was promoted to assistant division superintendent, with head-quarters at Victoria, Tex., and on March 1, 1942, he was transferred to Ennis in the same capacity, remaining in that position until his new appointment.

J. G. Tucker, trainmaster of the Texas & Pacific at Big Spring, Tex., has been promoted to assistant division superintendent, with headquarters at Alexandria, La. R. Whitis has been appointed trainmaster, with headquarters at Marshall, Tex., succeeding A. C. LaCroix, who has been transferred to Big Spring, replacing Mr. Tucker.

Sidney Lloyd Mapes, who on May 1 will assume his new duties as assistant general manager of the Jersey Central Lines, as reported in the Railway Age of April 21, was born at Port Jervis, N. Y., on June 15, 1890, and entered railroading with the Erie as assistant foreman (student) in the track department at Carlstadt, N. J., in 1911, joining the Jersey Central in August of that year as rodman.



Sidney Lloyd Mapes

He transferred to the maintenance of way department in July, 1913, as an engineering clerk, and was appointed chief material inspector on November 29, 1915. In June, 1918, he was named assistant supervisor of track, becoming assistant engineer in 1920 and assistant engineer, maintenance of way, in 1923. Mr. Mapes was promoted to engineer, maintenance of way, of the Central division in August, 1926, and in July, 1932, he was further advanced to engineer, maintenance of way, at Jersey City, N. J., with jurisdiction over all divisions, the position he will now relinquish to become assistant general manager.

L. L. Smith, whose promotion to superintendent of terminals of the Chicago, Burlington & Quincy, with headquarters at St. Paul, Minn., was announced in Railway Age of April 14, entered railway service with the Burlington in 1906. After serving in the maintenance, engineering and operating departments of other lines he returned to the Burlington in 1913 where he subsequently held various positions in the operating department. He was promoted to assistant division superintendent,

Effective results in power generation and control are achieved only as related equipment is scientifically pitched to a fine point of coordination.

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Ample grate and combustion areas and maximum evaporating surface within specified limits

SUPERHEATER DESIGN
To provide the greatest flue evaporating and superheating surfaces, with maximum free steam area for lowest pressure drop

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With Elesco Exhaust Steam Injectors
for the highest heat recovery per
unit of weight and cost



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with headquarters at Denver, Colo., and in May, 1943, he was transferred to St. Paul, Minn., remaining in that location until his new appointment.

J. H. Whelan, whose promotion to superintendent of terminals of the Grand Trunk Western, with headquarters at Chicago, was reported in the Railway Age



J. H. Whelan

of April 7, was born at Lansing, Mich., on May 8, 1897, and entered railway service on May 15, 1915, as a telegraph operator of the Ann Arbor at Owosso, Mich. In June, 1916, he went with the Grand Trunk as a telegraph operator at Detroit, Mich., and four years later he was promoted to train dispatcher, with headquarters at Durand, Mich. In October, 1931, Mr. Whelan was transferred to Battle Creek. Mich., and in July, 1936, he was advanced to chief dispatcher, with the same headquarters. On July 1, 1942, he was promoted to operating inspector at Detroit, the position he held at the time of his new appointment.

Andrew E. Stoll, whose promotion to division superintendent of the Chicago, Burlington & Quincy, with headquarters at Hannibal, Mo., was reported in the Railway Age of April 14, was born at LaCrosse, Wis., in June, 1892. He entered railway service in 1909 as a freight brakeman of the Green Bay & Western and one year later he went with the Burlington in a similar capacity. In 1925 he was advanced to yardmaster at Savanna, Ill., and three years later he was transferred to LaCrosse. In 1930 Mr. Stoll was promoted to trainmaster, with headquarters at Hannibal, serving in that position at various points of the road until 1940, when he was advanced to assistant division superintendent at Omaha, Neb., the position he held at the time of his new appointment.

H. Emmett Shumway, whose promotion to general superintendent of the Kansas-Colorado divisions of the Union Pacific, with headquarters at Kansas City, Mo., was reported in the Railway Age of April 7, was born at Atchison, Kan., on June 14, 1898, and entered railway service on July 1, 1917, as a clerk of the U. P., at North Platte, Neb. He subsequently served in various capacities until September 1, 1930, when he was advanced to trainmaster, with headquarters at North Platte, and

in April, 1937, he was promoted to assistant division superintendent at Omaha, Neb. On September 15, 1941, Mr. Shumway was advanced to division superintendent at Denver, Colo., and two years later he was transferred to Omaha, remaining in that location until his new appointment.

TRAFFIC

F. A. Norton has been appointed industrial agent of the Central of Georgia with headquarters at Atlanta, Ga.

James A. Scott has been appointed freight service agent of the Atlantic Coast Line at Wilmington, N. C.

R. J. Ball has been appointed general agent of the Missouri Pacific, with head-quarters at Brownsville, Tex., succeeding C. P. Lochridge, whose death on March 15 was reported in the Railway Age of March 24.

J. S. Buchanan, general agent of the Wabash at Buffalo, N. Y., has been appointed assistant general freight agent with the same headquarters, succeeding G. C. Knickerbocker, who has retired after more than 46 years of service. The position of general agent has been abolished.

John K. Dent, general coal freight agent of the Louisville & Nashville at Louisville, Ky., has been appointed coal traffic manager with the same headquarters, and Ben F. Morris, assistant to the vice-president at Louisville, has been named freight traffic manager, rates and charges, there.

Waldo Clarence Moir, district passenger agent of the Canadian National at Halifax, N. S., has been appointed special passenger agent there to deal with traffic in connection with members of the armed forces. John Joseph Leydon, city passenger and ticket agent at Halifax, has been appointed acting district passenger agent to succeed Mr. Moir.

ENGINEERING & SIGNALING

John Colin MacLauchlan, roadmaster of the Gaspe lines of the Canadian National, has been appointed division engineer and bridge and building master, Island division, at Charlottetown, P. E. I., succeeding Frederick S. Wilkins, who has retired.

G. G. Thomas, engineer, metal structures, of the Atlantic Coast Line at Wilmington, N. C., has been appointed engineer of bridges with the same headquarters.

B. E. Widder, architect at Wilmington, has been named engineer of buildings there, and A. C. Wessell has been appointed assistant engineer of buildings, also at Wilmington.

Harold J. McKenzie, whose promotion to chief engineer of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., was reported in the Railway Age of April 14, was born at Houston on October 11, 1904. He was graduated with a B. S. degree from Texas Agricultural and Mechanical College at College Station, Tex., in 1927. Mr. McKenzie entered railroad service in the

drafting department of the Southern Pacific Lines in Texas and Louisiana, in 1926, and from July, 1927, until March, 1936, he was employed in various progressive positions in the drafting department. During this period he also continued his education for a three-year period at a Houston engineering school, completing a structural engi-



Harold J. McKenzie

neering course. In 1936 Mr. McKenzie was appointed chief draftsman, continuing in that position until March, 1939, when he was named assistant to the chief engineer. In January, 1944, he was promoted to assistant chief engineer, the position he held at the time of his new appointment.

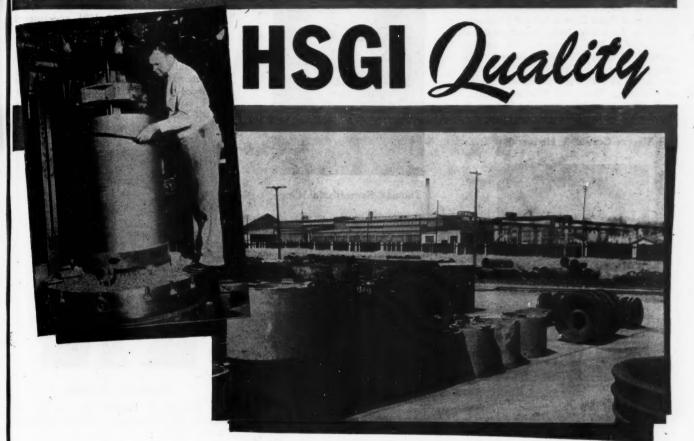
Harold S. Ashley, whose appointment as engineer of track of the Boston & Maine at Boston, Mass., was announced in the Railway Age of March 3, was born at Lowell, Mass., on January 7, 1893, and entered railroading in the engineering corps of the Boston & Maine as a chainman in September, 1912. After serving in various capacities in the engineering corps he was promoted to assistant engineer on November 4, 1923, becoming acting assistant division engineer in May, 1928. In October,



Harold S. Ashley

1929, Mr. Ashley was appointed track supervisor, resuming his duties as acting assistant division engineer the following November, and becoming assistant division engineer in January, 1930. On July 8, 1940, he was appointed construction engineer, and in November, 1941, he was named acting division engineer of the Portland

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April 28, 1945

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division. Mr. Ashley was promoted to division engineer of the Portland and Terminal divisions on March 16, 1942, remaining in that post until his recent advancement to engineer of track.

Ernest R. Logie, whose appointment as chief engineer, central region, of the Canadian National with headquarters at Toronto, Ont., was announced in the Railway Age of April 21, was born at Chatham, N. B., on August 16, 1886, and attended the University of New Brunswick. He entered railroading with the Grand Trunk Pacific (now the Canadian National) in 1907, and served as draftsman and instrumentman at Winnipeg, Man., and Edmonton, Alta., until 1910, when he joined the Bangor & Aroostook as draftsman and resident engineer at Houlton, Me. After serving with the Algoma Central & Hudson Bay from



Ernest R. Logie

1911 to 1912, he became resident engineer of the Canadian Northern (now the Canadian National) at Grand Hog River, Ont., and two years later he was named resident engineer of the Toronto Suburban Railway at Toronto. He served with the Toronto, Hamilton & Buffalo as resident engineer at Ft. Erie, Ont., and Hamilton from 1917 to 1919, when he became associated with the maintenance department of the Canadian National as resident engineer at Rosedale. On February 24, 1920, he was appointed division engineer of the Superior division, becoming office engineer at Toronto the following November. In June, 1921, he was named assistant engineer, and he remained in that post until March, 1928, when he was promoted to division engineer at Belleville, Ont. Mr. Logie was further advanced to district engineer of the Southern Ontario district with headquarters at Toronto in February, 1940, and on March 1, 1943, he was named engineer, maintenance of way, the position he held at the time of his recent appointment as chief engineer, central region.

Thomas Everett MacMannis, whose appointment as engineer, maintenance of way, of the Jersey Central Lines at Jersey City, N. J., effective May 1, was announced in the Railway Age of April 21, was born on January 19, 1897, at Lonaconing, Md., and after working as a rodman for the Cumberland & Pennsylvania for two years,

he was graduated from Cornell University in 1922. In June of that year he joined the chief engineer's department of the Baltimore & Ohio and on May 1, 1926, en-



Thomas Everett MacMannis

tered the service of the Jersey Central as assistant supervisor of track. In 1927 Mr. MacMannis was promoted to supervisor of track at Somerville, N. J., remaining in that post until July 9, 1941, when he was advanced to division engineer at Jersey City, the position he will relinquish to become engineer, maintenance of way, for the system on May 1.

D. M. Trotter has been appointed division engineer, Hornepayne division of the Canadian National, with headquarters at Hornepayne, Ont., succeeding A. V. Johnston, whose transfer to Belleville, Ont., was announced in the Railway Age of April 21.

M. F. Anderson, whose promotion to communications engineer of the Pere Marquette, with headquarters at Detroit, Mich., was reported in the *Railway Age* of April 7, was born at Pinckneyville, Ill., on November 20, 1901, and received his higher



M. F. Anderson

education at the University of Illinois. He entered railway service in February, 1925, as a signal draftsman of the Illinois Central at Chicago, and on April 1, 1927, he went with the Pere Marquette as a draftsman, with headquarters at Detroit. Mr. Anderson subsequently served as signal maintainer, leading signalman, signal inspector,

signal foreman and signal supervisor until being promoted to assistant signal engineer, the position he held at the time of his new appointment.

Walter M. Wharton, whose promotion to assistant passenger traffic manager of the Atlantic Coast Line at Jacksonville, Fla., was announced in the Railway Age of March 31, was born at Brownsville, Tenn., on November 10, 1891, and entered railroading with the Mobile & Ohio (now the Gulf, Mobile & Ohio), serving at Jackson, Tenn., and Memphis. He joined the Atlantic Coast Line in December, 1921, as commercial agent at Memphis, and was advanced to eastern freight agent at New York on January 1, 1929. On December 19, 1932, Mr. Wharton was named assistant general passenger agent at Jacksonville,



Walter M. Wharton

the position he held at the time of his recent appointment as assistant passenger traffic manager.

MECHANICAL

F. B. Downey, assistant shop superintendent of the Chesapeake & Ohio, has been appointed shop superintendent of the Huntington shops at Huntington, W. Va., succeeding E. A. Murray, who has retired after 55 years of continuous service.

SPECIAL

Mrs. Iva H. Andrews has been appointed supervisor of women's employment of the Denver & Rio Grande Western, with headquarters at Denver, Colo., succeeding Miss Catherine McGlone, who has resigned.

G. A. Moller, a member of the standing rate committee of the Western Trunk Line Committee at Chicago, has been promoted to chairman of the standing rate committee, with the same headquarters, succeeding J. B. Coffey, whose death on March 26 was reported in the Railway Age of March 21.

OBITUARY

Charles R. Pettengill, who retired in September, 1943, as assistant traffic manager of the Chicago, North Shore & Milwaukee, with headquarters at Chicago, died at his home in Libertyville, Ill., on April 21.

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In
One
Package

The 8½" Air Compressor is a compact compressor plant—complete with all the necessary auxiliaries. The governor to regulate compressor operation, and the F-2 lubricator to provide metered lubrication when the compressor is running are mounted right on the compressor.

Initially the installation is easier as less piping and fewer fittings are required. And at shopping periods the whole plant can be removed and replaced in a shorter time, with far less effort.

Refitting and testing of the unit are easier and

make for dependable compressor operation. Assembled right on the compressor, the governor and lubricator can be adjusted with the knowledge that these auxiliaries are functioning . . . when installed. And as no piecemeal fitting is required on the locomotive there is every confidence that the compressor plant will function as intended.

Integral mounting of these accessories means easier installation, more dependable compressor operation—greater assurance that the compressor will be on the job from shopping to shopping.

Westinghouse Air Brake Company

Wilmerding, Pa.

April 28, 1945

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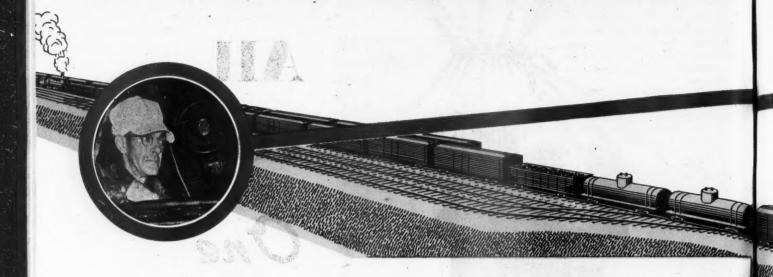
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MORE YARDS are using



Daily service in 16 great yards, in the hands of regular railroad employes gives the strongest possible proof of the dependability and practicability of "Union" Inductive Train Communication.

No other system of train communication can match this record of performance:

Cleveland, Cincinnati, Chicago & St. Louis Ry.

Sharonville, Ohio

One-way equipment for two locomotives and one office, utilizing one frequency, installed at the hump classification yard.

Chicago, Burlington & Quincy R. R. Co.

Galesburg, Illinois

Eastbound and westbound hump classification yards equipped for one-way communication using two frequencies to separate communications between the two yards. Equipment is installed on 10 locomotives and in the hump conductors' offices at the crests of both humps.

Lincoln, Nebraska

One-way, one-frequency equipment installed on three locomotives and in the hump conductor's office at the hump classification yard.

Great Northern Ry. Co.

Allouez, Wisconsin

One-way equipment, utilizing one frequency installed on two locomotives and in one office at the hump yard.

Louisville & Nashville R. R. Co.

DeCoursey, Kentucky

Equipment for one-way communication, utilizing one frequency installed on three locomotives and in one office at the hump yard.

Norfolk & Western Ry. Co.

Roanoke, Virgina

Two-way, one-frequency equipment installed on three locomotives and in one office at the hump yard.

The Pennsylvania R. R.

Altoona, Pennsylvania

One-way equipment installed on three locomotives operating in two hump yards. Two offices are also equipped. Two frequencies are employed to separate communications in one yard from those of the other.

Columbus, Ohio

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One-way, one-frequency equipment installed on three locomotives and one office at the hump yard.

UNION than all other train communication systems combined

Harrisburg, Pennsylvania (Enola Yards.)

One-way equipment installed on nine locomotives operating in two hump yards. Two offices are also equipped. Two frequencies are employed, to prevent interference between the two yards.

Indianapolis, Indiana (Hawthorne Yard.)

One-way, one-frequency equipment installed on three locomotives and in one office at the hump yard.

Pitcairn, Pennsylvania

One-way, one-frequency equipment installed

on eight locomotives and in one office at the hump yard.

Pittsburgh, Pennsylvania (Strip District.)

Two-way equipment, utilizing one frequency installed on two locomotives and three offices in an industrial switching district.

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UNION SWITCH & SIGNAL COMPANY

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NEW YORK

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ST. LOUIS

SAN FRANCISCO

Operating Revenues and Operating Expenses of Class I Steam Railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF FEBRUARY, 1945 AND 1944

Miles of road operated at close of month		United	States	Eastern	District	Souther	n District	Western	District
month	Item	1945	1944	1945	1944	1945	1944	1945	1944
Preight		220 545	220 044	56.012	56 112	41 222	41 199	129 201	120 344
Presight		220,343	220,044	. 30,012	30,112	73,332	40,000	127,201	167,544
Passenger		\$536,820,968	\$551,441,956	\$199,002,049	\$214,804,764	\$108,894,800	\$109,316,903		
Express 12,424,295 10,952,735 3,826,943 3,270,224 1,815,170 1,927,044 6,782,182 5,754,957 Railway operating revenues 72,885,550 27,213,339 1,2354,126 11,550,818 4,020,889 4,018,195 11,515,0535 11,644,326 Railway operating revenues 712,806,326 735,305,464 269,051,125 286,378,604 143,208,041 145,478,752 300,547,160 303,448,108 Expenses: Maintenance of way and structures 92,302,860 90,674,883 34,266,134 34,730,698 17,157,821 6,114,383 40,878,905 39,829,802 Deprectation 9,010,077 8,165,839 4,233,947 3,811,227 1,531,615 1,458,898 3,875,515 3,545,713 Retirements 206,370 8,665,790 42,723,866 219,952 44,163 85,581 98,401 261,227 Deferred maintenance 225,772 237,886 423,340 457,379 37,3115 236,426 972,141 639,584 All other 74,288,818 74,733,142 25,871,875 27,135,333 13,794,207 13,499,810 346,622,736 34,097,999 Maintenance of equipment 129,774,829 125,756,73 55,754,756 25,248,724 72,398 23,667,541 52,704,844 49,02,880 Metricents 23,755 24,704,740 12,749,7934 7,412,684 7,538,531 3,576,982 3,511,187 6,751,396 6,648,216 Requirements 17,741,062 17,497,934 7,412,684 7,538,531 3,576,982 3,511,187 6,751,396 6,648,216 Requirements 19,756,63 197,290 10,319 2,105 124,813 153,703 59,911 46,692 All other 94,707,602 94,643,664 39,259,884 40,901,823 12,205,686 21,209,155 52,455,555 40,500 1,50									
Railway operating revenues 71,286,326 735,305,464 269,051,125 268,378,604 143,208,904 145,787,752 300,547,160 303,448,108 Expenses: Maintenance of way and structures 92,302,860 90,674,883 34,266,134 34,730,698 17,157,821 16,14,383 40,878,905 39,829,802 300,547,160 300,447,160 300,447,160 300,447,160 300,447,160 300,448,108 34,266,134 34,730,698 17,157,821 16,14,383 40,878,905 39,829,802 300,547,160 300,447,160		9,818,854							
Expenses: Maintenance of way and structures Maintenance of equipment 117,741,062	Express				3,270,724				
Expenses	Railway operating revenues	712 806 326							
Maintenance of way and structures 92,302,860 90,674,883 4,293,947 3,811,27 1,517,821 16,114,383 40,878,905 39,829,802 3,875,515 3,545,713 3,615 1,458,898 3,875,515 3,545,713 3,615 1,458,898 3,875,515 3,545,713 3,615 1,458,898 3,875,515 3,545,713 3,615 1,458,898 3,875,515 3,545,713 3,615 1,458,998 3,875,515 3,545,713 3,615 1,458,998 3,875,515 3,545,713 3,615 1,458,998 3,875,515 3,545,713 3,615 1,458,998 3,875,515 3,545,713 3,615 1,458,998 3,875,515 3,545,713 3,045,494		7 12,000,020	, , , , , , , , , , , , , , , , , , , ,	207,002,120	200,010,001		- 10, 11 0,1 0-	,	,,
Depreciation		92,302,860	90,674,883	34,266,134	34,730,698	17,157,821	16,114,383		
Deferred maintenance Amortization of defense projects Equalization	Depreciation	9,701,077							
Amortization of defense projects Equalization (3.56,76.2 5.55.36.10 3.33.89 630.349 457.379 373.115 236.426 972.141 639.584 6.356,76.2 5.55.36.10 3.47.291 3.130.1144 1,414,721 83.3668 1,504,750 1,588,798 All other 74.288.818 74.733.142 25.871.875 27.135.333 13.794.207 13.499.810 34.622.736 34.097.999 Maintenance of equipment 129,774.829 125,375.673 52.347.947 52.635.252 24,722.398 23.697.541 52.704.484 49.042.880 Depreciation 17.741.062 17.497.934 7412.684 7.338.531 3.576,882 3.511.187 6.751.396 6.668.216 Retirements 71.06.003 77.118 8.000 71.241.020 13.107.903 5.667.544 4.390.634 4.186.481 3.624.731 7.386.995 5.092.538 Equalization of defense projects 19.59.63 197.290 10.319 7.3105 124.813 153.703 59.931 46.692 71.241.020 11.597.584 10.738.990 4.151.751 3.780.823 2.200.568 2.120.915 5.245.265 4.837.252 71.241.020 11.597.584 10.738.990 4.151.751 3.780.823 2.200.568 2.120.915 5.245.265 4.837.252 71.241.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020 11.241.020.020.020.020.020.020.020.020.020.02	Retirements	206,370			219,952	44,163	85,581		
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All other 74,288,818 74,733,142 25,871,875 27,135,333 13,794,207 13,499,810 34,622,736 34,097,999 Maintenance of equipment 129,774,829 125,375,673 52,347,947 52,635,252 24,722,398 23,697,541 52,704,844 49,042,880 Depreciation 17,741,062 17,497,934 7,412,684 7,338,551 3,576,982 3,511,187 6,751,396 6,648,216 Retirements 73,915 24,844 25,844 2									
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Depreciation Retirements	Maintenance of equipment								
Retirements Deferred maintenance and major repairs Amortization of defense projects Equalization of defense projects 195,063 197,290 10,319 *3,105 124,813 153,703 59,931 46,692 All other 94,707,602 94,643,664 39,259,884 40,901,192 16,834,122 16,407,920 38,613,596 37,334,552 Transportation—Rail line 240,558,340 239,281,826 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 Transportation—Water line 363 *276 Miscellaneous operations 8,945,205 9,325,439 3,306,474 3,379,830 1,388,215 1,479,993 4,250,516 4,655,616 General 16,463,395 16,697,296 6,572,794 6,844,833 3,148,873 3,466,521 6,741,728 6,385,942 Railway operating expenses 499,642,576 492,093,831 210,594,172 210,222,815 89,553,982 87,242,082 199,494,422 1994,628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-roll taxes 18,241,441 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,279,948 7,196,394 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 78,571,679 102,209,599 77,695,806 38,671,204 19,527,984 22,020,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Net reinfun									
repairs	Retirements	*3,915		*2,484				*1,431	
Amortization of defense projects Equalization of defense projects Equalization 195,063 197,290 10,319 *3,105 124,813 153,703 59,931 46,692 All other 94,707,602 94,643,664 39,259,884 40,901,192 16,834,122 16,407,920 38,613,596 37,334,552 Traffice 11,597,584 10,738,990 41,517,51 3,780,823 2,200,568 2,120,915 5,245,265 4,837,252 Transportation—Rail line 240,558,340 29,281,826 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 Transportation—Water line 363 *276 *363 *276 *363 *276 *363 *276 *363 *364,643 *3,379,830 1,388,215 1,479,993 4,250,516 4,465,616 General 16,463,395 16,697,296 6,572,794 6,844,833 3,148,873 3,466,521 6,741,728 6,385,942 Railway operating expenses 499,642,576 492,093,831 210,594,172 210,222,815 89,553,982 87,242,082 199,494,422 194,628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-roll taxes 18,241,414 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,279,948 7,196,394 Railway operating income taxes† 85,623,659 98,811,682 13,559,331 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 2,020,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007			****					*****	****
Equalization 195,063 197,290 10,319 *3,105 124,813 153,703 59,931 46,692 All other 94,707,602 94,643,664 39,259,884 40,901,192 16,834,122 16,407,920 38,613,596 37,334,552 Traffice 11,597,584 10,738,990 4,151,751 3,780,823 2,200,568 2,120,915 5,245,265 4,837,252 Transportation—Rail line 240,558,340 239,281,826 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 36 *276 Miscellaneous operations 8,945,205 9,325,439 3,306,474 3,379,830 1,388,215 1,479,993 4,250,516 4,465,616 General 8,945,205 9,325,439 3,306,474 3,379,830 1,388,215 1,479,993 4,250,516 4,465,616 General 99,064,2576 492,093,831 210,594,172 210,222,815 89,553,982 87,242,082 199,494,422 194,628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 17,695,806 38,671,204 19,527,984 22,002,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 11,335,189 Net railway operating income (per second context of expenses to revenues (per second context of expenses to revenue (per s	repairs			2 / (2 244		4 106 401	2 624 721		
Afl other 94,707.602 94,643,664 39,259,884 40,901,192 16,834,122 16,407,920 38,613,596 37,334,552 Transportation—Rail line 240,558,340 299,281,826 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 Transportation—Water line 363 276 363 362,668 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 363 6276 40,656,166 368,205 9,325,439 3,306,474 3,379,830 1,388,215 1,479,993 4,250,516 4,465,616 36,661 30,561 30							153 703		
Traffic 11,597,584 10,738,990 4,151,751 3,780,823 2,200,568 2,120,915 5,245,265 4,837,252 Transportation—Rail line 240,558,340 239,281,826 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 30.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4.6 4									
Transportation—Rail line 240,558,340 239,281,826 109,949,072 108,851,379 40,936,107 40,362,729 89,673,161 90,067,718 7276 Miscellaneous operations 8,945,205 9,325,439 3,306,474 3,379,830 1,388,215 1,479,993 4,250,516 4,465,616 General 6,463,395 16,697,296 6,572,794 6,844,833 3,148,873 3,466,521 6,741,728 6,385,942 81,042,082 199,494,422 199,4628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-ordi taxes 18,241,414 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,279,948 7,196,394 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,880,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 22,020,780 38,493,489 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 11,335,189 Net railway operating income (73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007	Traffic								4,837,252
Miscellaneous operations 8,945,205 9,325,439 3,306,474 3,379,830 1,388,215 1,479,993 4,250,516 General 16,463,395 16,697,296 6,572,794 6,844,833 3,148,873 3,466,521 6,741,728 6,385,942 Railway operating expenses 499,642,576 492,093,831 210,594,172 210,222,815 89,553,982 87,242,082 199,494,422 199,4628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-roll taxes 18,241,414 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,279,948 7,196,394 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,880,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 22,020,780 38,493,489 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income (73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007 Ratio of expenses to revenues (per	Transportation-Rail line		239,281,826	109,949,072	108,851,379	40,936,107	40,362,729		
General 16,463,395 16,697,296 6,572,794 6,844,833 3,148,873 3,466,521 6,741,728 6,385,942 Railway operating expenses 499,642,576 492,093,831 210,594,172 210,222,815 89,553,982 87,242,082 199,494,422 194,628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-roll taxes 18,241,414 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,279,948 7,196,394 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,994 22,020,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income (per	Transportation-Water line								
Railway operating expenses 499,642,576 492,093,831 210,594,172 210,222,815 89,553,982 87,242,082 199,494,422 194,628,934 Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 78,182,182,183 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 78,940,706 3,157,358 3,185,715 7,279,948 7,196,394 74	Miscellaneous operations								
Net revenue from railway operations 213,163,750 243,211,633 58,456,953 76,155,789 53,654,059 58,236,670 101,052,738 108,819,174 Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-roll taxes 18,241,414 18,322,815 7,804,108 7,940,706 21,57,358 3,185,715 7,279,948 7,196,394 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,885,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459	General								
Railway tax accruals 127,446,071 141,002,034 30,761,147 37,484,585 34,126,075 36,215,890 62,558,849 67,301,559 Pay-roll taxes 18,241,414 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,279,948 7,196,394 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 22,020,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007									
Pay-roll taxes 18,241,414 18,322,815 7,804,108 7,940,706 3,157,358 3,185,715 7,229,948 7,196,394 Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,880,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 22,020,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007									
Federal income taxes† 85,623,659 98,811,682 13,539,334 19,856,625 25,849,331 28,017,914 46,234,994 50,937,143 All other taxes 23,580,998 23,867,537 9,417,705 9,687,254 5,119,386 5,012,261 9,043,907 9,168,022 Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 22,020,780 38,493,889 41,576,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007	Railway tax accruais	19 241 414							
All other taxes									
Railway operating income 85,717,679 102,209,599 27,695,806 38,671,204 19,527,984 22,020,780 38,493,889 41,517,615 Equipment rents—Dr. balance 9,066,507 11,678,819 4,904,742 5,815,616 *38,288 607,784 4,200,053 5,255,419 Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007 Ratio of expenses to revenues (per									
Joint facility rent—Dr. balance 3,487,713 3,316,321 1,574,756 1,591,425 398,781 389,707 1,514,176 1,335,189 Net railway operating income 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007 Ratio of expenses to revenues (per	Railway operating income				38,671,204	19,527,984	22,020,780	38,493,889	41,517,615
Net railway operating income . 73,163,459 87,214,459 21,216,308 31,264,163 19,167,491 21,023,289 32,779,660 34,927,007 Ratio of expenses to revenues (per	Equipment rents-Dr. balance	9,066,507	11,678,819	4,904,742	5,815,616	*38,288	607,784	4,200,053	5,255,419
Ratio of expenses to revenues (per	Joint facility rent-Dr. balance	3,487,713	3,316,321	1,574,756	1,591,425	398,781	389,707	1,514,176	
						19,167,491	21,023,289	32,779,660	34,927,007
cent)									-
	cent)	70.1	66.9	78.3	73.4	62.5	60.0	66.4	64.1

FOR TWO MONTHS ENDED WITH FEBRUARY, 1945 AND 1944

	Unite	d States	Eastern	District	Souther	District	Western	District
Item	1945	1944	1945	1944	. 1945	1944	1945	1944
Miles of road operated at close of		228,852	56,013	56,117	43,333	43,388	129,202	129,347
Revenues: Freight	\$1 005 603 516	\$1,099,860,765	\$399,436,438	\$427,529,140	\$222,392,664	\$217,946,079	\$473,864,414	\$454,385,546
Passenger		275,996,016	107,396,609	108,348,213	54,499,590	57,280,107	103,203,528	110,367,696
Mail		20,144,673	6,876,018	6,727,947	3,681,734	3,727,869	10,328,279	9,688,857
Express	. 24,489,685	24,201,668	7,191,659	7,927,071	3,691,820	4,075,338	13,606,206	12,199,259
All other operating revenues	57,974,138	55,774,074	25,560,975	24,221,632	8,504,224	8,137,781	23,908,939	23,414,661
Railway operating revenues‡	. 1,464,143,097	1,475,977,196	546,461,699	574,754,003	292,770,032	291,167,174	624,911,366	610,056,019
Expenses:	- 100 424 165	180,178,134	71,123,859	69,492,019	35,127,940	32,162,859	83,172,366	78,523,256
Maintenance of way and structure Depreciation	s 189,424,165 19,286,246	17,628,212	8,499,978	7,618,434	3,054,502	2,918,526	7.731,766	7.091,252
Retirements	. 19,280,240	1,037,864	143,107	423,991	98,602	167,496	318,474	446.377
Deferred maintenance		*591,984	*62,420	*22,133	70,002	107,470	*399,687	*569,851
Amortization of defense project			1,240,164	892,595	731,359	470,245	2,114,863	1,265,858
Equalization		12,029,232	6,429,734	6,693,171	2,802,363	1,970,205	2,723,322	3,365,856
All other	153,998,038	147,446,112	54,873,296	53,885,961	28,441,114	26,636,387	70,683,628	66,923,764
Maintenance of equipment	. 266,998,130	254,555,359	108,131,005	107,274,649	50,707,741	47,383,797	108,159,384	99,896,913
Depreciation	. 35,549,470	35,290,971	14,910,157	14,820,267	7,157,363	7,132,152	13,481,950	13,338,552
Retirements			*7,755		*4,849		*4,839	
Deferred maintenance and majo	r		.,		-,			
repairs	. *247,603	*51,775		8,000			*247,603	*59,775
Amortization of defense project	s 34,025,030	24,890,645	11,195,047	8,355,494	8,177,902	6,548,356	14,652,081	9,986,795
Equalization		214,432	7,513	9,698	250,215	136,474	99,106	68,260
All other		194,211,086	82,026,043	84,081,190	35,127,110	33,566,815	80,178,689	76,563,081
Traffic		21,805,900	8,178,937	7,793,808	4,390,437	4,205,244	10,496,752	9,806,848
Transportation-Rail line		487,531,891	224,877,553	220,804,708	84,791,016	82,576,452	187,822,193	184,150,731
Transportation-Water line	. 445	*1					445	*1
Miscellaneous operation	. 19,171,045	18,856,097	7,126,285	6,824,638	3,080,130	2,995,107	8,964,630	9,036,352
General		33,179,525	13,564,599	13,501,396	6,456,771	6,667,029	13,703,719	13,011,100
Railway operating expenses		996,106,905	433,002,238	425,691,218	184,554,035	175,990,488	412,319,489	394,425,199
Net revenue from railway operation		479,870,291	113,459,461	149,062,785	108,215,997	115,176,686	212,591,877	215,630,820
Railway tax accruals	. 261,153,300	277,797,445	61,218,773	74,523,767	68,879,189	71,848,922	131,055,338	131,424,756
Pay-roll taxes		37,057,287	16,025,828	15,982,228	6,546,162	6,414,083	15,141,661	14,660,976
Federal income taxes†		192,572,764	26,198,532	38,819,895	52,113,274	55,289,126	97,598,872	98,463,743
All other taxes	47,528,971	48,167,394	18,994,413	19,721,644	10,219,753	10,145,713	18,314,805	18,300,037
Railway operating income	. 173,114,035	202,072,846	52,240,688	74,539,018	39,336,808	43,327,764	81,536,539	84,206,064
Equipment rents-Dr. balance	. 20,158,498	23,055,838	9,917,811	10,919,214	164,424	1,284,120	10,076,263	10,852,504
Joint facility rent-Dr. balance	6,777,021	6,804,579	3,315,365	3,343,360	691,065	800,942	2,770,591	2,660,277
Net railway operating income .		172,212,429	39,007,512	60,276,444	38,481,319	41,242,702	68,689,685	70,693,283
Ratio of expenses to revenues (pe	r							
cent)		67:5	79.2	74.1	63.0	60.4	66.0	64.7

^{*} Decrease, deficit, or other reverse items.

† Includes income tax, surtax, and excess profits tax.

‡ Railway operating revenues are after deduction of \$6,138,150 for the two months ended with February 1945, and \$6,589,269 for the two months ended with February 1944 to create a reserve for land grant deductions in dispute.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

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The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service



PRINTED IN U. S. A.

"UNION" CODED TRACK CIRCUIT CONTROL

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1933

1938

First installation of three- and four-indication wayside and cab signaling in electrified territory.



1934

First installation of three- and four-indication wayside and cab signaling in steam territory using storage battery track circuits.

First installation in multiple track territory with reverse running on one track.



First 11,000-ft. track circuits using primary or storage

First application of coded reverse circuit for approach lighting of wayside signals and approach application of cab signal energy.



First installation of three-indication wayside signaling 1939 only in steam territory employing the 11,000-ft. track circuits.

> First application of tuned alternator as a standby for supply of cab signal energy.

First application as "detector" track circuits in interlockings.

1940

First installation of cab signaling without wayside automatic signals in steam territory.

First application of approach-energized tuned alternators as the sole source of cab signal energy.

First installation in single-track territory with Centralized Traffic Control.

First installation of A.P.B. with three- and four-indication signaling.

First installation using coded detector track circuits and line wire signal controls.

1942

1943

First installation of four- and five-indication signaling in electrified territory.

First installation with three-indication signaling for either direction operation using polar reverse codes.





Normally De-energized

CODED TRACK CIRCUIT CONTROL for C. T. C. territory*

After extended testing in regular railroad service, The Union Switch & Signal Company announces a new addition to its long list of achievements in track circuit systems-Normally De-energized Coded Track Circuit Control. Track circuits between sidings and local circuits at intermediate signals are energized only when the operator of the C.T.C. machine sets up a route which includes these areas.

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- 1. Reduces power requirements to a minimum depending primarily on the density of traffic. One road estimates that with 15 trains daily, circuits are energized each way for only two hours in each twenty-four.
- 2. Lends itself to highly efficient operation with primary batteries. Power wires between sidings in C.T.C. territory are unnecessary.

Our nearest district office will be glad to furnish full information.

* The first installation was made on the Milwaukee and is described in the April issue of Railway Signaling.

> UNION SWITCH SIGNAL COMPANY



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The Week at a Glance

MASS, FACES THE FACTS: Massachusetts has become the first state with sufficient honest realism to recognize that the railroads are no longer in a position to indulge in the charitable occupation of carrying commutation passengers at less than cost, while the outlook for the business becomes constantly more hopeless as traffic is spirited away by toll-free super-highways. Under the Massachusetts proposal, the state would organize a rapid transit "authority" to take over existing transit lines and operate an electrified short-haul service on the railroads, the suburban trains to be diverted from railroad terminals in the heart of the city and, instead, be routed through existing rapid transit tunnels. By unification and getting rid of taxes (through state ownership) the Massachusetts commission reckons that transit service can be made profitable, and turned from a declining into a growing business. Facilities to care for the traffic can be provided by transit lines at one-fifth the cost of highways to accommodate comparable traffic, and the transit lines won't cost the taxpayer anything, nor involve a parking problem. This interesting and foresighted proposal is reviewed in a short article in this issue.

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FREIGHT CAR TRUCK TESTS: Detailed requirements for performance testing of freight car trucks are given in a paper in this issue by Chief Engineer Cottrell of American Steel Foundries. Directions for removing confusing variables from the tests are offered, along with practical suggestions for dependable observation. Tests conducted by the A. A. R. in 1939 and subsequent study have led the author to several specific conclusions of characteristics desirable in a high-speed freight car truck, and he reveals them.

HUGE SAVINGS IN GROUTING:
"Water pockets" in roadbed, which necessitate constant maintenance attention to the track above them, and frequently require slow orders against trains for extended periods, are being overcome on the New York Central, Lines West, by cement grout applied pneumatically to keep water out of the unstable sub-soil. An illustrated article herein describes the method employed, and the article and an editorial reveal the ratio of savings to expenditure. A return of something like 150 per cent or more upon the investment seems to be a reasonable expectation from such work.

HOBBS BILL NEEDED: The rail-roads know from experience that they cannot afford again to increase their ratios of bonds to stock—but look at the present market! With sound bonds in unprecedented demand at interest rates only a little higher than those of government securities, railroad stocks are selling in what is considered to be a bull market at prices at the mid-depression 1936-37 level. The only kind of "railroad credit" which has any effective meaning to the country's need for modern transportation service is that which will enable and encourage the carriers to raise new capital for improvements. Of

this kind of credit, it cannot be said, generally speaking, that the railroads have any-because they dare not enlarge their fixed-interest obligations and they can't sell stocks. One of the obvious causes for the disfavor under which stocks are laboring is the complete "liquidation" (in the Nazi or Russian sense) to which the I. C. C. has subjected them in reorganizations, despite clear proof that they represent large earning power. An editorial concludes that passage of the Hobbs bill to prevent the I. C. C. from continued operation of a Buchenwald cadaver plant for equities is necessary for the revival of railroad credit in the most socially-important meaning of the term.

2ND CLASS CITIZENS: By what reasoning can pensions and unemployment and sickness insurance (the latter entirely at the employer's expense), on an especially liberal basis, be justified for railroad employees, while all other Americans are placed in an inferior category, to receive much more modest benefits? The leading editorial in this issue says that some measure of the special favors in pensions accorded to railroad employees under existing law can probably be justified because, individual railroads having been largely relieved of their private pension obligations, they agreed by collective bargaining to existing generous annuity arrangements. Most of the unions (there are honorable exceptions), however, have now repudiated collective bargaining on the question and are seeking much larger benefits to widen still further the gap between their position and that of Americans of inferior rank. The difficulty lies in the fact that competing agencies of transportation are taxed to support only the relatively modest outlays under the general social security law-a further handicap to the railroads in meeting competition. If railroad employees are to be still more expensively favored, railroad traffic and jobs will suffer proportionately. As usual, the little fellow at the bottom of the seniority list will take it on the chin.

FAMINE IN TIES: Inadequately seasoned ties, treated in advance of proper maturity, are being robbed from stocks which ought to stand till 1946-that's how bad the shortage of crossties is. A survey among leading tie producers in the area east of the Rockies indicates that production in the first two months of the current year was down from 40 to 50 per cent under last year. It is reported herein that this famine arises from "ceiling" prices which are too low to bring the timber out of the woods, or to insure that what does come out is put into the shape of ties rather than other kinds of lumber where minimum prices are high enough to yield a larger return. Historians who record the story of the current war will fail in their task if they do not note how, domestic transportation having come so easily to the war planners, they developed a conviction that all the service they could use would continue to be proffered, without their taking thought of even the elementary means to

TESTING ON THE N. & W.: Scientific examination of materials and supplies as it is practiced on the Norfolk & Western to assure acceptability of products for the employment to be given them-is the subject of an illustrated article in this issue. The road's process of inquiry does not, moreover, stop merely with testing but gets over also into development. An effective protective coating for the interior of freight cars and a testing machine for flashlight batteries are among the many contributions this application of scientific techniques has made to more efficient railroading. laboratory staff is set to work on all kinds of "trouble-shooting" assignments and corrective measures issue from such study. almost without exception. An enormous reduction in hot boxes, better water service and improved performance of steel parts are among the further accomplishments of this comprehensive endeavor.

CLERIC RAPS TRAVEL BAN: A Congressman has introduced a bill to exempt religious organizations from the ban against conventions of more than 50 persons where travel is required. It appears that a holy man sought to secure this preferential treatment for his flock by a personal appeal to the director of the O. D. T., but was unsuccessful, and this objective is now sought by legislation. What answers Colonel Johnson gave to this argument are not revealed, but he could have cited plenty of authoritative evidence indicating that proficiency in moral and spiritual exercises is more often associated with solitude than with agglomeration.

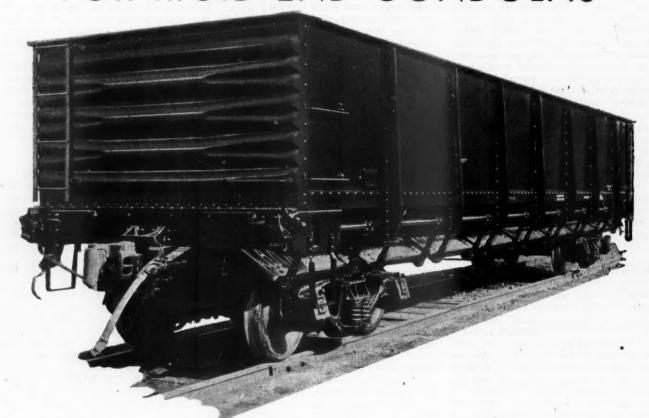
GRAVY FOR AIR LINES: The Senate commerce committee has recommended for passage a bill authorizing \$500,000,000 federal outlays on airports-to be matched by equal largesse from the states -a subsidy of \$1 billion in all. When hearings were held by the committee, Chairman Bailey made some pointed observations to the effect that such federal expenditures should be made contingent upon users' fees to reimburse them, but this legislation calls for an outright donation from the taxpayers, who are all so rich and prosperous that they won't notice tossing away a few more billions to hardy and self-reliant "private enterprise," about which so much more is heard than is seen.

WHAT THEY SAY ABOUT DIXIE: The Committee on "Fair Employment Practice" was scheduled to begin hearings at Houston, Tex., on May 4 on complaints against the Texas & New Orleans and the Brotherhood of Railroad Trainmen, which allege that colored folks are being denied opportunities for jobs as switchmen "solely because of race or color," and that the union has an agreement with the company calling for such discrimination. In New York and several other northern states inquisitiveness by a prospective employer into the racial origins of an applicant for a job is a punishable misdemeanor, but such anachronistic curiosity is still tolerated on the part of persons contemplating matrimony.

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Why Special "Social Security" for R. R. Employees?

Under the federal "social security" law, an employee who works 30 years at an average monthly wage of \$200 is eligible at age 65 to a pension of \$42.50 per month, if single, and to \$63.75, if married and his wife is also 65 vears old. Under the Railroad Retirement Act, a railroad employee with the same wages, same age and same length of service would draw a monthly pension of \$90, or more than twice the payment to the single non-railroad annuitant. An important further distinction between ordinary "social security" benefits and those provided for railroad employees is that railroad employees coming to the age of retirement are eligible for pensions to the full amount based on their total years of service, whereas, under ordinary "social security," the size of the annuitant's pension is determined not by the number of years he has worked but by the number of years he has paid taxes into the federal pension fund.

There are other differences between old-age pensions as applied to railroad employees and those available to employees of other industry, but in almost all instances the railroad employee is favored by the comparison; and, to make sure that there are no exceptions to this general rule, a clause in the Railroad Retirement Act provides that no beneficiary under it shall receive less than he would receive if he came under the general "social security" law. For these larger benefits, the law as it now stands will subject the railroad employee to a tax on his wages at an ultimate limit of 3¾ per cent, while, for the smaller pensions under the general "social security" law, the ultimate tax rate on the employee is to be 3 per cent.

What the Unions Ask

Despite these special advantages which railroad employees are already enjoying under existing legislation, most of their union leaders are not satisfied and, with the assistance of Murray Latimer, chairman of the Railroad Retirement Board, are sponsoring legislation in Congress to provide numerous additional benefits to railroad employees, as a favored class in the community. Among the proposed changes are the following:

Annuities for a railroad pensioner's survivors, somewhat similar to those provided under the general "social security" law, but 25 per cent larger.

Increases in all pensions in the "lower brackets" and for shorter periods of service. (For example, an employee whose wages averaged \$50 per month up to 19 years' service would draw the same pension as an employee whose wages had been \$175 per month, but the latter would in this period pay 3½ times the sum in taxes than the lower-rated employee would pay.)

Liberalization of the conditions under which pensions are paid for disability, before reaching the retirement age.

Unemployment insurance for employees of other industries is a state enterprise, but for railroad employees there is a special federal law providing compensation during periods of unemployment. Under both the state systems and the federal provisions for railroad employees, the cost is borne entirely by a payroll tax (usually 3 per cent) on employers. Some of the state systems provide for a reduction in this tax on employers where experience has shown that the benefits can be paid from lower charges, but no reduction has been made in the tax levied on the railroads although the enormous reserve of \$540 million has been accumulated. Instead of reducing the tax on the railroads, or suspending it altogether until the reserve fund shows need for replenishing, the predominant leadership of the unions is proposing to disburse this reserve (and then some, probably) by greatly expanded unemployment benefits.

Unions Oppose Collective Bargaining

For example, the proposal is that the maximum daily payment on account of unemployment be increased from the present \$4 to \$5 and that the number of days that this payment may be collected be increased from 100 to 130. Furthermore, it is proposed to make these payments, not just to employees ready to work for whom no jobs are available, but to those who are prevented from working—not by any act of the employer—but because of illness. That is, it is proposed that insurance against unemployment be expanded, entirely at the employers' expense, to include insurance against all hazards to health.

Some justification may be found for the railroad retirement law in its present form-despite its greater generosity than the general "social security" law-because it was the result of collective bargaining between railroad unions and railroad managements. Without managements' acquiescence at the time, the Railroad Retirement Act would probably have been declared unconstitutional by the Supreme Court, which so ruled on the predecessor to the present law. However, the act has stood unchallenged since 1937, and, since that time, the personnel of the Court has been considerably altered. Most of the unions, which once held "collective bargaining" in such apparent esteem, have now turned their backs on the process and are seeking their objectives by unilateral political action. Speaking for the unions which are supporting the proposed legislation-designed to make railroad employees a still more privileged class in "social security" benefits-D. B. Robertson recently indicated that the collective bargaining process was too slow to be henceforth acceptable to him.

The differences between "social security" for the bulk of Americans, and that already provided, and now proposed to be greatly enlarged, for railroad employees as a specially favored class, are discussed at length in a pamphlet by R. B. Robbins, vice-president, Teachers Insurance and Annuity Association,* who raises the question of the social justification for setting apart one group of citizens for such special treatment. From the standpoint of the railroads, they are faced with the possibility under proposed legislation of having to meet payroll levies of 9½ per cent to provide "social security" for their employees, whereas other industry, including rival agencies of transportation, will pay an ultimate tax of only 6 per cent. This disparity will simply add one more inequity to the many already borne by the railways in meeting the rivalry of tax-assisted competition. The shipper who depends on railroad service will have to pay rates high enough to sustain these special favors to railroad employees in which he and his employees do not participate.

If railroad employees could secure these special advantages without loss of job-opportunities, possibly these proposed additional benefits would be to their advantage. All the evidence points, however, to a difficult competitive struggle by the railroads in the post-war period, and anything which will add, as would proposed liberalization of "social security" for employees, to the handicaps from which the railroads already suffer will penalize railroad employees in jobs as much as it will the railroads in traffic. Moreover, before demanding greater disbursements, the unions would be well advised to look into the solvency of the existing pension fund, of which competent opinion has raised serious question. A healthy bird in hand is still worth a couple, however gaudy, in the bush. Generous "social security" for railroad employees will not create very widespread satisfaction if the number of people permitted to enjoy such liberality is reduced to a mere handful.

* "Railroad Social Insurance," published by the American Enterprise Association, 4 E. 41st St., New York 17, price 50 cents.

A Sky Full of Planes?

The airplane industry has its elements of romance—and also of romancing. Beautiful pictures have been painted of the sky of the future so full of planes that flying traffic cops will be necessary. Estimates in astronomical figures have been broadcast which foretell a stratosphere full of super-transports. The facts, as developed by certain of the more studious and practical men of the airplane industry, give meager support to these fanciful imaginings.

G. M. Williams, senior vice-president, Curtiss-Wright Corporation, has recently said: "Despite the important role of air transport, we cannot count on commercial aviation to be able soon to absorb the output of more than a small fraction of the county's present aircraft production capacity. Just prior to the war the air lines were operating about 340 transport planes. Naturally, their needs after the war, with expanded routes, better equipment and increased travel, will be much greater, but with new transport types carrying double the load of present airliners it is unlikely that domestic commercial aviation will require more than 1,000 planes by 1950. That is a long way from the usual 'blue sky' expectation of tens or hundreds of thousands of planes blackening the sky."

After pointing out that modern navigational instru-

ments will enable planes to fly in nearly all kinds of weather and largely eliminate the disruption of schedule caused by the fact that only about 92 per cent of peace-time commercial flights could be started or completed, Mr. Williams discussed the size of future planes.

"Put it down in your little black book right now," he said, "that by far the majority of post-war air travel, at least for several years, will be in planes little larger than those now in regular air line service. There is no place in the foreseeable future for vast fleets of super-super-transports making frequent domestic stops, carrying upward of 200 passengers. There will be a demand for 10 to 15-passenger planes for feeder service; a plane about the size of the present largest air liner for trunk line operation; a 36 to 60-passenger plane which will carry the bulk of the air line business; and a very small number of very large transports capable of carrying 100 or more passengers in transoceanic or trans-continental flights.

"The tremendously large transport plane is ruled out of ordinary domestic operation, for the present at least, because of cost factors. It is far more economic to have a number of 40-passenger planes on frequent schedules, operating near capacity, absorbing overload from other flights, than to have extra-large equipment flying far short of capacity on some schedules in order to maintain regular service."

Mr. Williams spoke at the Chicago Forum of Aviation on April 10 and was one of a number of speakers who deflated some of the extravagant claims that have been made. An analysis of his figures indicates that, on a liberal estimate, the average seating capacity of the post-war planes will be about 37 passengers, or materially less than the average railway passenger car capacity. His figure of a maximum of 1,000 planes in commercial service taken in conjunction with the average capacity figure should not produce too violent alarm among railway passenger traffic officers.

Of course, what the distant future may bring forth in the way of air liners is anybody's guess, and this, with the fact that a single plane can pile up a lot more passenger-miles in a day than can the railway passenger car, should prevent complacency among railway officers. Also, it should be remembered that the bulk of these planes will be concentrated on the most profitable runs. Even so, the railways have excellent means of helping them meet competition in the form of increased comfort, centrally located terminals and economical rates.

Tie Production Slump Demands Prompt Action

In an address before the Maintenance of Way Club of Chicago a few days ago, and abstracted elsewhere in this issue, A. C. Mann, vice-president, purchases and stores, Illinois Central, pointed to the falling production of crossties, and insufficient supplies of rail, track fastenings and other materials as the forerunner of critical track conditions within the near future.

The downward trend in crossties production which began last August now has assumed alarming magnitude. The total production of 13 tie companies that ordinarily produce approximately 55 per cent of the crossties manufactured east of the Rocky Mountains, declined during the months of January and February 42 per cent compared with the production during the same period last year. That this figure is conservative is evident from results obtained by a broader survey, conducted among practically all of the tie producers in the same area, which reflects a reduction of 47 per cent during the same period.

Although several reasons may be ascribed for the shortage of crossties, the fundamental reason remains the same, inadequate ceiling prices and discriminatory regulations which favor the production of lumber by hundreds of small mills throughout the country that ordinarily devote practically all of their efforts to the production of crossties. Scarcity of labor in the woods and at the mills stems from the same reason and little or no help can be expected from the United States Employment Service, principally because so many bet-

ter jobs are available at higher wages.

While it is anticipated that sufficient crossties will be made available generally to meet 1945 renewal programs, in many instances these ties were not accumulated, as Mr. Mann has intimated, from the 1944 production. For instance, one of the largest railroads in the country was forced even during 1944 to resort to the treatment of unseasoned ties by the Bolton process because tie production fell so sharply that it was impossible to follow its standard procedure of air seasoning prior to treatment. With steadily falling production it has been necessary to continue this procedure notwithstanding the fact that serious doubts are entertained with regard to the prospective life of the treated ties and the fact that such artificial seasoning greatly prolongs the time that the charges must be retained in the treating cylinders, requires more fuel and imposes

greater difficulties and a greater load upon treating plant facilities.

Many of the railways in 1944 were forced to dip into stocks that had been produced for 1945 treatment and insertion. So the cycle continues this year, with the result that many railways again are forced to dip into 1945 production, normally intended for 1946 or 1947 use, and treat by various means if they are to supply the demand for crossties in 1945. Every week and every month of delay in facing the situation and applying remedial measures, which to a large extent would be met by an adequate upward revision of ceiling prices, prolongs this vicious cycle and imposes evergrowing responsibilities upon railway procurement and maintenance officers, responsibilities of no small proportions if the Japanese war is to be prolonged as many of our military authorities assert, and the tremendous demands of rail transportation are continued in conjunction with redeploying our forces and redirecting war materiel to the Pacific theatre.

The Hobbs Bill Should Be Enacted

This paper does not oppose "drastic" reorganizations of bankrupt railroads—in the sense that, when a railroad is unable to meet interest charges or maturing obligations, the resulting correction undertaken in its capital structure goes just as far as past experience indicates is necessary to curtail fixed charges and to make provision for the unembarrassed satisfaction of future maturities. A reorganization which does not reduce fixed-interest indebtedness within the limits of the capacity of a railroad to carry the burden under

the most adverse conditions which past experience indicates may again recur is only a palliative and not a cure. Moreover, stockholders who have failed to discharge their indebtedness are not entitled to participate in a reorganization without assessment and with their original equity unaltered.

There are two simple principles upon which all willingness to invest in industrial enterprises is based and these are (1) security of principal or of ownership and (2) a reasonable prospect of a return in the form of interest or dividends. Arbitrarily taking the property of A and bestowing it upon B is an infallible means of teaching A never again to put his savings where, experience has taught, such treatment may be repeated.

A Friend Stops to Ask His Way



It is for this reason that, when a mortgage obligation is defaulted and its owners are compelled in a reorganization to accept contingent interest securities in exchange, it is unjust that equity-holders should retain to the same degree as formerly an unassessed participation in the ownership of the property. The loss, that is, from the bankruptcy of the property should fall upon the equity-holders and not upon those who lent their money.

But, while it is unjust and destructive of the willingness of lenders to put their savings in railroads if they have to accept inferior claims on property and earnings while owners of the company escape unscathed from their failure to pay their debts, it is obviously equally destructive of the willingness of investors to put their savings in equity securities if their property is to be arbitrarily taken from them and bestowed upon others.

The kind of reorganizations of bankrupt railroads which the Interstate Commerce Commission is insisting upon, and in which it has been sustained by the Supreme Court, accord precisely this last-mentioned treatment to the equity-holders. That is, going beyond the reasonable satisfaction of the claims of creditors, the Commission has proceeded to oust the equity-owners from their ownership entirely, on an assumption that their residuary interest is valueless. Experience utterly belies this assumption. As the report of the House judiciary committee on H.R. 37 (the Hobbs bill to amend Sec. 77 of the bankruptcy act) says:

"In 1942 the Missouri Pacific earned \$32.67 a share on the common stock outstanding under the old capitalization; the Denver & Rio Grande Western \$34.40 a share; Rock Island \$25.11; Frisco \$18.03; St. Louis Southwestern \$27.23. These figures were approximately repeated in 1943, and high earnings [continued] in 1944."

In other words, the economic usefulness of the property of old stockholders of these companies has been concretely demonstrated—yet the Commission says that ownership claims upon this property are so worthless that without injustice they may be taken away from their holders and bestowed upon company creditors, or perhaps upon the users of transportation service.

No owner of property can reasonably object to penalties upon his equity sufficient to the reasonable satisfaction of indebtedness, but he is not going to be very enthusiastic hereafter about investments of a type where a temporary reduction in earnings is used as an excuse to deprive him of his ownership entirely, even after indebtedness is adequately repaid.

There are, perhaps, some other reasons why sound railroad mortgage obligations have attained prices almost without precedent while stock prices still linger in a so-called bull market at a level no higher than that of 1936-37, but the comparative treatment which has been accorded to the two classes of securities is certainly outstanding among these reasons.

The restoration of railroads' ability to finance their needs for improvements requires a restoration of the market for railroad equities, and the Hobbs bill does not go any further than to require that owners of these securities be not expropriated on grounds no more equitable than an obviously erroneous guess that the property they reflect has lost its economic value. The Hobbs bill, therefore, or a reasonable likeness thereof,

must be enacted if normal private investment sources are again to be open to the railroads, in the economically healthy form of equity securities. No hope for this result can be entertained so long as the opportunity and likelihood of arbitrary expropriation of such investments continue to be the law of the land.

Big Dividends

Railway managements seriously interested in improved track and large returns on investment will find helpful information in the article in this issue entitled "Roadbed Grouting Pays Big Dividends," even though the technical phases of the work described are outside the immediate field of their thought and endeavor. It is because it is so important that railway managements appreciate the large economic possibilities in roadbed stabilization, that the phrase "Pays Big Dividends" was used deliberately in the heading on the article, rather than words which would describe the methods discussed.

Whoever reads this article looking for means of effecting large returns on expenditures will not be disappointed if he is satisfied with yields which range as high as 300 per cent on the outlay annually, accompanied by other advantages in improved train operation, which may well in some instances be even more attractive than the monetary return. To be specific, the New York Central System, whose work is described, estimates that through the 36,379 track-feet of grouting it has carried out during the past four years, at a cost of about \$54,750, it is effecting savings in track labor alone amounting to \$85,880 a year, or an average annual return of more than 150 per cent.

Can railroads afford to expend the necessary labor on this class of work in view of the present labor shortage? The figures available from New York Central records indicate that the man-hour savings resulting are so large that the roads can scarcely afford not to carry out work of this kind, at least where the possibilities in savings are the largest.

Converting the monetary savings in this work into labor saved, employing average hourly rates of pay, the New York Central is currently avoiding approximately 150,000 man-hours of unnecessary track maintenance annually, equivalent to the work of 50 men employed 300 ten-hour days a year. Combined with the removal of slow orders, which has been the rule where the roadbed stabilization has been carried out, these results are so arresting as to command the attention of every road with stretches of soft track requiring an inordinate amount of routine maintenance—and what road does not have its share of such track?

Whether the method of correction is to be grouting, as being employed by the New York Central and described in the article referred to, or pipe subdrainage, deep ditching, or pole driving, which, under many conditions have brought about results equally as striking, is a matter for engineering and maintenance officers to decide. The point is that all of these methods, where appropriate and properly applied, promise such remarkable results that economy, the conservation of labor, and improved train operation, demand that they be given thoughtful consideration.





IN THIS era of faster rail transportation it is very evident that every improvement made to speed up train operation requires a correspondingly improved retardation control. In fact, retardation and stopping are even more important than rolling because as train speeds increase the momentum of the moving mass increases as the square of the velocity. For when the velocity is doubled — the momentum is quadrupled.

The New York "HSC" Brake Equipment is designed for high speed passenger service insuring uniform retardation throughout the entire speed range from maximum to stop. Comfort of the passengers during all deceleration controlled stops is insured by the provision for automatically changing the deceleration control rate to a low value at the approach to a stop in order to prevent jolts. The automatic adjustment features also insure proper rail adhesion and prevent wheel sliding.

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Report No. 10



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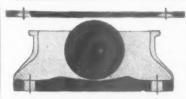
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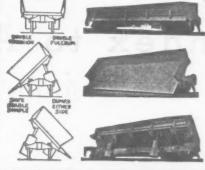
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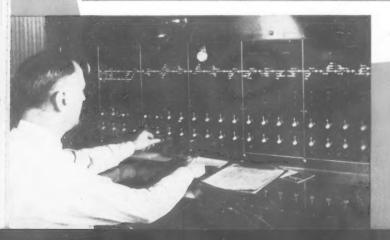
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В	12.9	18.0	39.5%	42.0	30.0	12.0	28.6%	1.33
С	15.8	21.5	36.1%	120.0	88.4	31.6	26.3%	1.00
D	13.7	20.2	47.5%	184.2	124.8	59.4	32.2%	1.41
E	14.4	19.3	34.0%	507.0	380.0	127.0	25.0%	1.04



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